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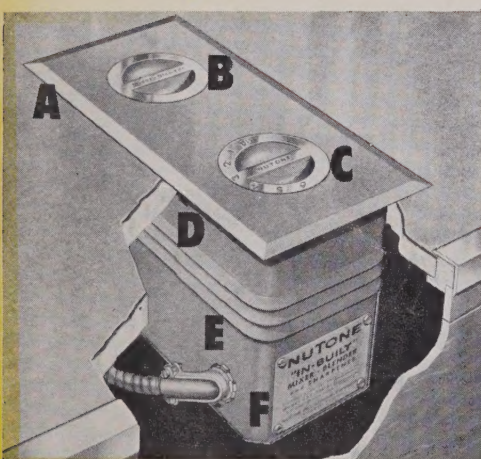
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Housing heads down, but brakes are loosening

Home Loan Bank relaxes its ban on S&L borrowing to make loans—but only by 5%. Government ponders restoring 30-year VA, FHA terms

Evidence of crisscross credit restrictions coming out of Washington seemed to betoken a schism within the administration.

While the Federal Reserve Board upped the discount rate for the fourth time in a year, the Home Loan Bank Board eased its clampdown on the savings and loan associations (see below). Home building was down a little more in November (see below), but there were many economists who still thought the curbs had done more good than harm.

What next? In spite of the conservatism of the Fed and the Treasury, indications were that housing curbs would be further eased—perhaps by early January. It looked as though putting the maximum amortization on FHAs and VAs back from 25 to 30 years would be the first step.

The worriers about inflation had a case. Materials prices were still high and shortages had brought on more reports of a gray market in some products. Gypsum, fir framing and cement, for example, were going at premiums in some boom areas.

Materials' prices pause in their upward flight after 5% rise

The materials prices situation was in a queer state of flux. Most experts said prices were going up, but BLS figures for November showed an over-all drop of 1/2 point. Most materials prices were stable—for the month. Exceptions: plumbing equipment, up 3.6 points in a month; prepared asphalt roofing, which dropped nearly 14 points because of seasonally-slackened demand and high inventory.

For the year, materials prices had advanced by nearly 5%. (The increase was considerably greater in many areas.) It was in the busiest sections of the nation that the rise in materials cost was appreciable. Gypsum wallboard rose from \$42 to \$56 per thousand sq. ft. in one city; even so it grew scarce. Fir framing was up \$15 per thousand bd. ft. in the same city and cement up 15¢ a bag. Other items: ▶Cris Dobbins, president of Ideal Cement Co., predicted that cement makers would overproduce by 15% if they went ahead with expansion plans.

▶On Long Island, Anthony S. Zummo, new president of the Home Builders Institute, urged members to keep away from black market operations in sheet rock that might crop up again as they did in 1949.

HLBB allows members to borrow up to 5% of their total savings

The Home Loan Bank Board continued its gradual about-face on credit tightening. It modified its September ruling that member associations could not borrow from the system to expand mortgage lending volume

—a ruling already watered down by more than \$155 millions net of loans to take care of outstanding S&L commitments. New ruling: a member institution can borrow an amount equal to 5% of its aggregate withdrawable accounts provided that its total advances outstanding from the system do not exceed 10% of such accounts.

On paper—considering the savings and loan associations' total savings as around \$30 billion—this looked as though HLBB was making \$1.5 billion available. But experts pointed out that some associations have never borrowed and never expect to and still others have already reached the 10% cutoff point. Upshot: maybe \$200 million will be released. But a little goes a long way in the mortgage market and the industry now has a much-needed policy guide for the next six months.

HLBB Chairman Walter McAllister said the new policy reflects "the success of member institutions in bringing their commitments under control." In September, he said, members had \$2.4 billion in mortgage commitments. But by the end of December, these would fall to only \$1.6 billion—approximately the same volume as at the end of 1954. McAllister noted that 1955 would be S&L's biggest lending year—\$11.5 billion, up \$3 billion from 1954.

How much have builders cut back because of credit restrictions?

Requests for FHA commitments and VA appraisals were down in the cellar by November. FHA applications were 16,921, compared to 28,735 for the same month in '54; VA requests slumped to 30,397, compared to 47,729. Starts fell to 90,000—lowering the seasonally-adjusted pace of housing from October's 1,242,000 to 1,203,000.

Many areas were much harder hit than national totals. Examples:

▶Starts in Los Angeles County in the summer quarter ended Sept. 30 dropped 22% below the previous quarter. In Orange County, the drop was 32%. Mortgage loans made by savings and loan associations in California dropped 16% in October.

▶Home building in New York fell in October and November compared to 1954. Said State Housing Commissioner Joseph P. McMurray: "The declines... appear to indicate that this [tight money] policy is already having untoward effects."

▶Greater Memphis had an unsold inventory of 432 newly-completed homes, an increase of 89.5% over July 1 and of 157.1% over late November '54.

▶A leading mortgage banker in Detroit estimated that starts there were off 40% from a year ago, said he knew of one builder who withdrew 100 committed cases for homes in the \$17,000 bracket.

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Housing men tell the government where it hurts

Senate hearings stress how general credit curbs hit housing harder than the economy in general. But the Fed indicates the lid will stay on

The important results of Sen. John J. Sparkman's round-table hearings on housing and mortgage credit policy can be summed up this way:

► The nation's top money managers—Chairman William McChesney Martin of the Federal Reserve Board and Treasury Undersecretary Randolph Burgess—made it clear they plan to keep the fiscal brakes tight on the booming US economy. Reason: they still fear inflation. Both warned that construction—particularly home building—has been pressing against the limits of materials and labor. Bluntly, what that means to home builders is: 1) big discounts on FHA and VA loans are likely to be the rule for some time to come, 2) the pinch on mortgage money may ease up more gradually than was generally expected a month ago—but it will ease.

► The Home Loan Bank Board revealed its more flexible attitude—a viewpoint apparently inspired by the White House council of economic advisers and one which led the *Wall Street Journal* to call administration policies “criss-cross credit controls.” HLB Chairman Walter McAllister announced that S&Ls will be allowed to raise a limited amount of funds for home loans again by borrowing from the regional banks (see p. 37).

► Senator Sparkman—the only member of his nine-man subcommittee who showed up for the Nov. 28-29 hearings—backed down from his opposition to mortgage discounts. Mid-way in the discussion, he said they “tend to negate public policy.” After most of the five top mortgage men present warned him that banning discounts would make the feast-or-famine tendencies of the mort-

gage market worse, Sparkman conceded “reluctantly” that discounts are “a necessity.” Later, he told *HOUSE & HOME* he hoped FHA and VA would exercise “more surveillance” over discounts to prevent abuses.

► Industry spokesmen hammered hard—and so did Sparkman—at the point that tightening general credit produces a disproportionately hard effect on housing. Reason: the mortgage market—biggest part of the long-term money market—reacts drastically to small changes in yield while consumer credit does not. Key mortgage lenders are big companies investing money held in trust; therefore they are acutely conscious of yield. General consumers, however, are much more interested in the availability of a loan than the interest they will have to pay for it. Summed up one participant: “I think Martin got the idea that this is a damn sensitive business and if you move too fast or too hard you can kill it.” The Treasury's Burgess, some felt, was least moved.



SEN. SPARKMAN (FRONT) & STAFFERS
Reluctant approval for discounts

► Leon Keyserling, ex-President Truman's one-time chief economic adviser who is now regarded as chief braintruster of the public housers, made it clear time and again he (and presumably a sizable bloc of labor unions) is for pumping up the housing output of the nation to hitherto undreamed of heights, even if it risks inflation. “We need a little more housing than something else,” he said. Keyserling, Builder Tom Coogan and Sparkman all taxed the administration with clamping down on housing—an essential—while letting consumer credit run riot for “autos and gadgets.” Quipped a newsmen to an NAHB official: “When did you put Keyserling on your payroll?”

► Sparkman indicated he was adopting a good bit of the Keyserling viewpoint when he observed: “There is a widening gap between the amount of housing that can be supplied within the present mortgage structure and the needs of the country. . . . We should not let the money market have complete power of decision as to [how many] housing units we can build.”

► In the end, the results of the nearly nine hours of talk among 15 leaders of government and industry will probably be more notable for the nudge they may give administration by the Federal Reserve, the Treasury, HHFA, FHA and the HLBB than for any legislation that may emerge. Sparkman, for instance, was making noises about excessive closing costs under FHA and VA. He accused the two agencies of not being “sufficiently diligent in protecting the home buyer,” called for more standardization of permissible fees. FHA was already at work on this.

On many a key issue, industry spokesmen disagreed with each other or with government officials. Their clashing philosophies threw a sharp light on the forces tugging in 1956 at what one panelist called the nation's “most controlled industry.” For details of the discussions, see pp. 39, 41.

Highpoints of a controversy-laden seminar on housing's land, mortgage and credit problems

THE SCENE: the red-carpeted caucus room of the Senate office building in Washington—a high-ceilinged vault with marble walls, lit dimly by chandeliers and somewhat better by shafts of daylight through the tall windows. It is the place where the McCarthy vs. Army hearings played before TV last year, and so it is wired for sound. But so small was the crowd that the engineer at the microphone console hardly need have adjusted the volume. The policies which govern housing—a major industry controlled by government and one with a fearfully multiplying effect on the economy—commands only a little public interest and even less understanding. The discussants sit around an oval mahogany table big enough to feed a fraternity.

In calling the hearings, Chairman Sparkman of the Senate housing subcommittee said: There are signs that federal credit restrictions may be jeopardizing the orderly growth of home building." Thus administration officials were forced on the defensive. Three discussants—Ex-NAHB President Tom Coogan, Economist Leon Keyserling and Builder William J. Levitt—generally tried to keep them there. Most of the other panelists agreed with administration efforts to balk inflation by curbing credit, or complained about the timing or degree of the actions but not their direction.

Federal Reserve Chairman Martin, as head-off witness, shouldered the main defense, fenced graciously but effectively with his protagonists but conceded he was "much impressed" by Charlie Wellman's suggestion (see below) that the Fed needs selective controls over consumer credit.

Excerpts from the discussions:

Why the Federal Reserve fears inflation (Martin speaking): "The solicitude of all of us is to prevent another 1929. The impact of housing on this picture is just incidental. I don't know what the level of housing ought to be. We're convinced we're doing a disservice to householders and the community if policies are pursued, however inadvertently, which [develop] a pace that cannot be sustained.

"With the housing industry operating close to capacity and bidding actively against other industries for resources, prices of materials have increased. The demand for funds has been be-



EX-NAHB PRESIDENT COOGAN

What happened to the market?

yond the supply of savings. To meet these demands by creating new money through the commercial banking system with Federal Reserve assistance would invite dangerous inflationary repercussions throughout the entire country.... The inflation will not create jobs that can be sustained, but quite the contrary, will undermine the stability of existing jobs and will eventually probably create two unemployed for one unem-



ECONOMIST KEYSERLING

Should we build more homes, less autos?

ployed that there might be if we had a more reasonable pace."

Why the Treasury wants housing curbed was explained this way by Undersecretary Burgess: "Building material costs since mid-'54 have moved up 10% under the impact of the tremendous increase in new housing starts. If materials and labor are available only at increasing prices, the result is a higher-priced house. It is the home buyer who suffers. Continued increase in the cost of homes could sharply limit the future market for houses and limit our progress toward improved housing standards."

Builder Bill Levitt said the only items pushing up price of housing are rising land and interest costs. "When we left Long Island to go to Pennsylvania we sold off some land. We had paid \$2,500 an acre two years before and sold it in 1951 for \$4,500 an acre. It was resold a year and a half later for \$8,000 an acre and sold in 1954 and '55 for \$15,000 an acre. You can't put a house on that kind of ground and give any kind of value. Your price must go up. The price of aluminum is up, but aluminum

continued on p. 41

A six-point plan to keep housing expanding on a smooth keel

Executive Vice President Charles Wellman of Glendale Federal S&L suggested a six-point program—partly controversial but wholly brilliant—to take the kinks out of the flow of mortgage credit. It was the most comprehensive plan broached during the sessions, deserves wide study throughout the housing industry. Said Wellman:

"The present condition in the mortgage market is the direct result of conflict between the social objective of a steady, sustainable growth of the economy and the social objective of more and better housing for everybody. The closer we approach the goals of the Employment Act of 1946 [which made full employment a national policy] the oftener such conflicts will arise. Basically, we are facing a problem of rationing resources—by direct controls or by materials allocation. I prefer rationing of credit. In terms of that, government policy has to aim at minimizing the conflicts. Experience this year should aid in developing policies, organization and arranging techniques." He proposed:

1. "Varying terms on FHA and VA houses have an impact on effective demand and should be more closely and promptly coordinated with actions by the monetary authori-

ties. It does no good for FHA and VA belatedly to recognize what the Fed has done—and change their terms accordingly—after they read about it in the newspapers."

2. "The Federal Reserve needs selective control over consumer credit [Reg. W] so it can—on occasion—avoid using general credit controls which in times of full employment have a particularly heavy impact on housing credit."

3. "Internal policies of the Home Loan Bank should be reconstituted so as to avoid even temporary locking of its facilities" [Apparently this is already under way, as witness

the board's fresh relaxation of its purse strings, p. 37.]

4. "More information than ever" about housing and its markets.

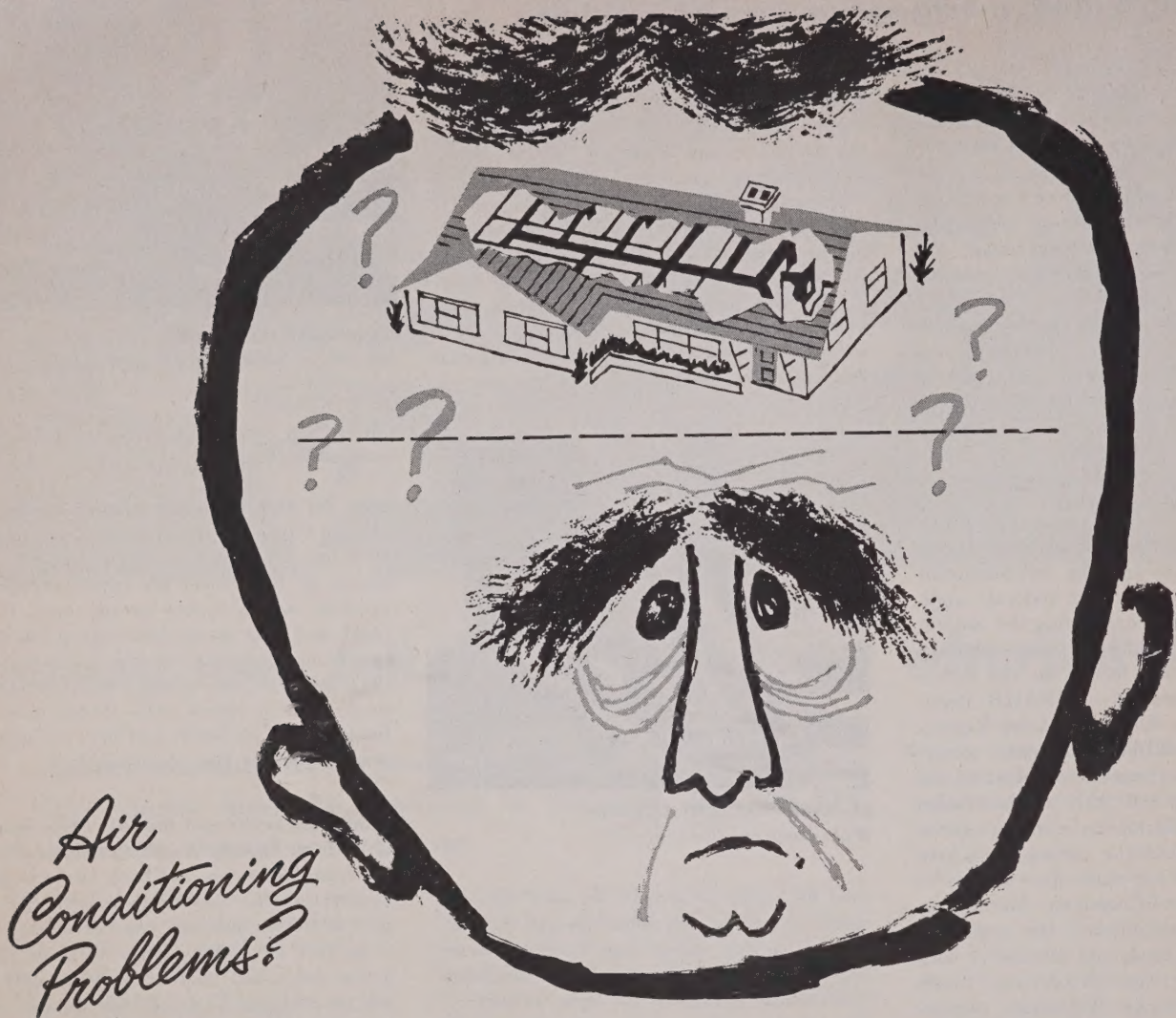
5. "Industry and government should resist any effort to cut the umbilical cord tying housing to capital formation by excessive government financing through FNMA or some other organization."

6. "We should broaden the mortgage market by bringing more investors into it [e.g. pension funds]. This will take a long time. It will not solve present difficulties."



PANELISTS TURNER, WELLMAN & LEVITT

A six-point plan to minimize inevitable conflicts



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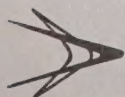
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GOVERNMENT WITNESSES SWEENEY, STONE, McALLISTER & MARTIN (SPEAKING)
Result of the warehousing "ban": still more short-term loans

windows went down. A steel kitchen cabinet is cheaper in 1955 than it was in 1953 and '54."

"Price increase No. 2 is mortgage money. My own company used to get money at par. We now buy it at 97 to 97½. Let's not fool ourselves that that isn't a cost of construction. The public pays for it."

How good or bad are home sales? Government spokesmen insisted the home building industry was doing all the business it should. Said Levitt: "Business has been bad—very bad—for the last 60 days." He cited a study of the last 500 applications to buy his homes; 29% of would-be buyers would fail to qualify under the new FHA and VA terms (which will not affect Levitt until May). In planning next year's output, Levitt said he was "gambling" that housing will be off only 10%.

Can the housing industry push its output up if the government eases controls? Levitt told Martin: "You say if we get into trouble the Federal Reserve will execute an about face. It won't do us any good. I am quite positive you will take off the brakes . . . in April or May . . . but I cannot gamble on it. It will (then) be too late for the mass of builders. It will take them another six to eight months to gear up."

Coogan: "Seventy per cent or more of our housing construction can be directly controlled by the government, but controls are very slow taking effect. We have built so many houses the buyers just aren't there. When you withdraw the 2% down, 25-year-term control, when the Home Loan Bank modifies its stand, people will think that's all that is necessary for volume to go up. That's a delusion. It isn't going up."

What has happened to mortgage warehousing? The Fed's Martin revealed results of a new survey which showed that despite cries of "no money," commercial banks since August have been advancing short-term funds for mortgages faster than old commitments have been reduced. On Nov. 16, said Martin, such warehousing credit had reached \$1,618 million, or \$207 million more than in August. Martin apologized for the "misconstructions" banks put on the celebrated warning against warehousing abuses issued so furtively by the New York Federal Reserve Bank.

Coogan noted that "it doesn't take many inquiries (such as the Fed's caution on warehousing) before bankers decide not to make that kind of loan instead of defending their actions." Admitted Martin: "You raised a good point—the psychological factor. It's very difficult to deal with."

Will there be just as much mortgage money in 1956 as there was last year? As Vice President Manning Brown of New York Life Insurance Co. pointed out: "Right now my company is planning to put exactly the same amount of

money into mortgages in 1956 as in 1955. It may be slightly more; it won't be any less. Generally, that is true of the whole industry."

But will discounts get so high the VA-FHA market locks? Warned Mortgage Banker William A. Clarke: "If the interest rate remains pegged at 4½% so the mortgage market is faced with continually increasing discounts, they may rapidly get to the point where there can be no profit to the builder." He forecast the prime loan rate will go to 3¾%. When that happens, "the 97½ Levitt is paying may readily go to 95. At 95, Levitt is in a position to wonder if he should build at all."

Added Vice President Robert Morgan of Boston's 5¢ Savings Bank: "If discounts rise more, the same discredit will fall on discounting as on warehousing. There ought to be somebody in government big enough to change the interest rate to keep discounts in bounds." Said McAllister: "If conditions remain as they are, there is only one thing to do—for Congress to raise the interest rate [on FHAs and VAs]. At present, I wouldn't advocate that."

Is the lack of adequate statistics on housing markets leading the industry into quicksands? Prof. Ernest Fisher of Columbia University built a powerful case for more housing statistics by

Photos: H&H staff



PROF. FISHER

Does the used-house tail wag the market?

the device of asking every government witness the same question: did he have any information on the relation between the price of houses and mortgage terms? Nobody had a shred of data, although FHA Commissioner Norman Mason testified the price of old houses is falling while the price of new homes continues to climb. Fisher warned Mason's report may foreshadow vast changes for home selling.

During the last 15 years of sellers' market in housing, said Fisher, "what determined the price of existing housing—and I suspect new housing to a much greater extent than we realized, was not the cost but the ability of the borrower to pay down and so much per month. In such a market, there is a tendency for liberalization of

mortgage terms to be capitalized in the price of existing housing as well as new construction. But if we move into a buyers' market—as we may—there will be a tendency for the price of existing construction to control the market and it will be much more difficult to sell new construction at prices that will cover the cost." Fisher called for: 1) a better rent index, 2) sales data by size of houses, 3) by location, 4) by price range and 5) more data on utilization of the existing stock of homes.

Can the nation afford the luxury of two bureaus—VA and FHA—to do one job? Builder Bill Levitt bravely attacked housing's political sacred cow: an independent VA home loan program. Having both FHA and VA processing loan papers and inspecting houses, he charged, is wasting \$500 to \$750 million a year which the public pays. He continued: "It [VA] was all right as war hysteria. But the fellow who isn't a veteran is now a second-class citizen. It's wrong . . . it's criminal. On a \$10,000 house with only one agency to do business with we could save close to \$300 per house. When we file an application on each house we pay FHA \$45. If the house is sold FHA, FHA returns \$25. If the house goes VA, we don't get a refund. So when the veteran buys a house from us, it costs \$25 more—the same identical house—not one more shingle in it."

"FHA will say: 'You may use ½" plaster' and VA will say 'No, you can't use ½" plaster.' A builder not only goes crazy but it represents direct out-of-pocket cost trying to reconcile the difference. One of you must be wrong. Why do we have two very big bureaus doing exactly the same kind of work on the same property?"

HHFADMINISTRATOR AL COLE: "Very easy. Congress will not change it."

VA's TOM SWEENEY: "It's been before Congress perennially over the last eight or nine years. I think it has been studied well from all angles." LEVITT: "It hasn't been given any thought at all. What happened is it had one of the most ardent lobbies in the world, the American Legion and VFW (I'm a member of both) opposing it. It's wrong—all wrong. If you're looking for places to reduce the cost of construction, this is No. 1." COOGAN: "I disagree."

Should government pump up housing because of the "social need"—irrespective of the financial measures required? Said Keyserling: "Practically every great economic difficulty we have got into, including the depression, resulted from trying to shape our real resources to our financial resources rather than making our financial resources, which are man-made, shape to our natural and human resources. We are drifting (this way) in housing."

Retorted Economic's Prof. Robert Turner of Indiana University (who served as White House economic consultant under Truman): "The real solution lies not in further extensions and manipulations (of credit and terms) but by getting the real cost of housing down. It's manifestly impossible to continue indefinitely to stimulate housing by doubling the mortgage debt every five years." He questioned continuing to stimulate housing "when resources are fully utilized," warned such a course "is likely to result only in the same house for more money. . . . If the demand for housing rests on such a narrow base than an increase in VA down payments from zero to 2% devastates the housing market, something is fundamentally wrong."

NEWS continued on p. 43

THERE'S A NEW TREND IN BATHROOMS!

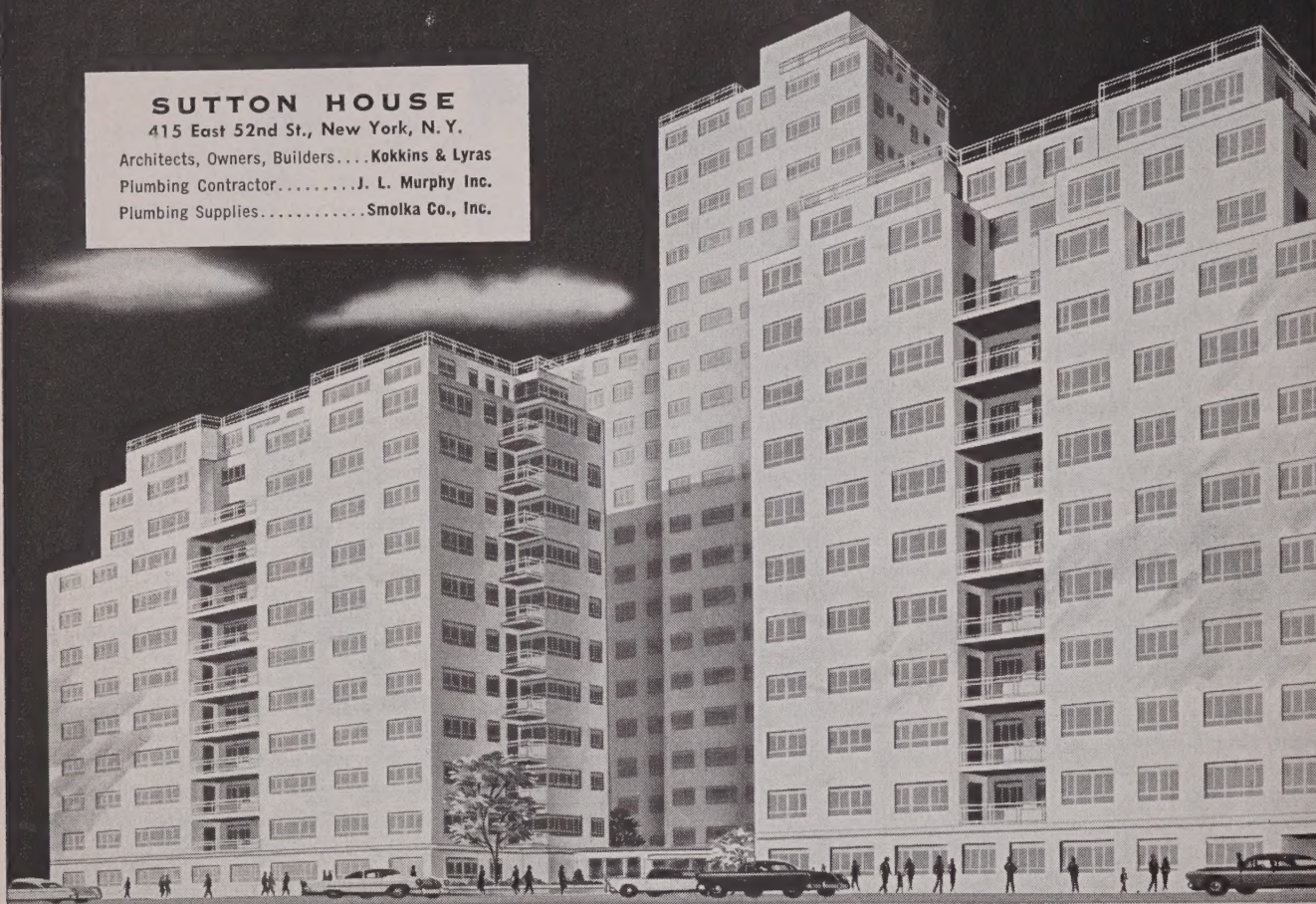
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What to expect from Congress on housing

Politics will make for sharp debate but little solid accomplishment. Look for efforts to tinker with mortgage credit and push aged and middle-income housing

Is a political hurricane blowing up over housing policy?

Some of Washington's sagest onlookers fear so. There are two big reasons:

1. Housing is headed toward being a lively issue of the fall presidential campaign (see below). There are minor squalls already.

2. Both Republicans and Democrats are committed to maintaining a high-level of starts. With so much controversy being aired over discounts on FHA and VA loans, the mortgage market seems to invite Congress to tinker with mortgage credit policies again. The prospects by topics:

Mortgage money—Look for a continued ruckus over discounts, and perhaps a fairly determined effort by Democrats to curb them. Rep. Wright Patman (D, Tex.), a member of the House banking committee, says he will introduce a bill to limit the discount at which FHA and VA mortgages may be sold.

Fanny May—Both the Senate and House banking committees have indicated they think the Federal Natl. Mortgage Assn. is doing a weak-kneed job bolstering home loans. Sen. John Sparkman (D, Ala.), and Rep. Albert Rains—both influential in housing matters—agree with NAHB that Fanny May's 3% stock purchase requirement for its secondary market operations should be cut. There is also strong backing for NAHB's view that the agency should buy mortgages at a price which leads rather than follows the market as the law now requires.

Sparkman favors adding middle-income housing to the specially-favored programs (military and cooperative housing) now eligible for Fanny May advance commitments and direct support. But he opposes using the government lending agency to underpin the whole mortgage market. NAHB will push for a better central mortgage bank, either through an expanded Fanny May or a revamped Home Loan Bank System.

Public housing—Should live up to its reputation as the most contentious housing issue before Congress. The White House, as of mid-December, was expected to ask for 105,000 units for the next three fiscal years. As last year, this will satisfy neither the public housers who want much more nor the private industry which wants none at all.

HHFA under Al Cole will probably not even make an effort to persuade Congress to restore the two links between public housing and slum clearance which were killed last year. These are: 1) the requirement that a city have an overall workable program for fighting blight before it can qualify for public housing, and 2) can build public housing only for slum displacees.

Housing for the aged—The subject is bound to get attention because it is such a vote-catcher. HHFA and FHA have been

working up a plan to let private industry tackle the problem before public housers do (Dec., News). Crux of the plan is to let children co-sign mortgages for their parents—on the theory this would make them acceptable loan risks. Another scheme: non-profit organizations sponsored by church, labor or fraternal groups.

FHA Title I repair loans—This will be the most important FHA section which expires this year. The Sept. 30 cut-off date will probably be extended another year after skirmishing over the interest rates borrowers pay. Title I carries a 5% discount, which means a true interest of 9.7%. That is low as consumer credit goes (Title I repair loans go through commercial banks, not mortgage channels). Most lenders charge 11% or more for financing autos, appliances and uninsured home repairs. But many a Congressman even 9.7% is too much.

Home Loan Bank Board—A few amendments will probably be trotted out for a try, although savings and loan men will be cautious about attracting too much attention lest the newly independent HLBB be plopped back into HHFA. One plan would let federally chartered S&Ls use up to 5% of their assets to buy land for development. The idea is to make it easier for small builders to find sites. Another proposal would bar holding companies from creating S&L chains. This became an issue last summer when a Lehman Bros. holding company bought a controlling interest in the Great Western

S&L of Los Angeles. HLBB took a deep interest, but found no power to intercede.

VA housing—The big question is whether Congress will extend VA home loans for World War II veterans. As the law stands, they cannot get VA home loans after July 27, 1957. VA has taken a neutral stand on extension, but urged Congress to make up its mind this year to avoid a last minute rush that could play hob with the whole housing market. There are 12 million World War II veterans who have not used their home loan privileges. VA thinks 2 million of them would if the program is extended. Chairman Olin Teague (D, Tex.) of the House veterans affairs committee will oppose an extension. Says he: "The program is being run for the benefit of leaders, not to help veterans."

Rental housing—The lack of it will probably be loudly debated, with little result. Congress will scold FHA for leaning too far over backwards as a result of 608 windfall scandals. Says one Democratic policy maker: "Builders could learn to live with cost certification if FHA would get off its high horse and take a more liberal view" of reasonable profits and other regulations.

Urban renewal—Congress will scold HHFA and FHA for floundering, but if scolding does not work—it hasn't so far—look for some liberalizing of the law. Under consideration for FHA Sec. 220 and 221: amendments spelling out the builders' profit and contributions, creating a special force of FHA underwriters for 220 and 221.

See "Middle-income housing: the new battleground," p. 30, for an analysis of what promises to be touted as the liveliest new issue in housing this year.

Democrats set out to make housing policy a big political issue in presidential race

Housing is getting into 1956 politics early. Two Democratic Party leaders have laid down housing planks for this fall's campaign.

Senate Majority Leader **Lyndon B. Johnson** (D, Tex.) included housing as part of a 13-point "program with a heart" he intends to push in Congress this session. Johnson's proposal—as brief as it is obscure—is notable chiefly for the presumed political sex appeal of its implications. He urged: "A housing program designed for America's families who are yearning to build or rent dwellings they can afford."

Presidential Hopeful **Adlai Stevenson** was much more specific. "We must deal with the causes rather than the symptoms of the cities' continued ills," he told the American Municipal Association at Miami.

Thereupon, in a talk mixing penetrating comment with pure bunk, he proposed remedies that would deal largely with the symptoms of slums and blight. He called for:

1. More public housing—a program "measured not by the limitations of false economy

but only by the needs of our lowest income families." Stevenson asserted that federal public housing had been "significantly cut back" in the last three years. (This is true, but it was done by Congress, not the administration—Ed.)

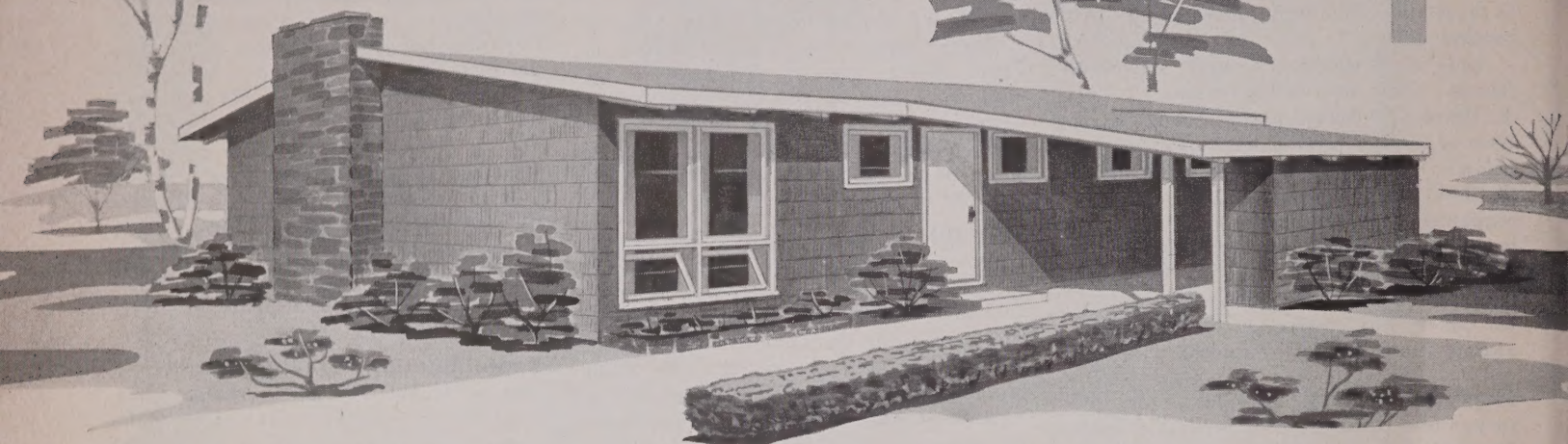
2. "A system of practical governmental incentives that will bring decent private housing within the reach of the middle-income group." Stevenson asserted that it is "increasingly clear" that only a small percentage of the 32% of US urban families who earn \$3,000 to \$5,000 a year are "able to finance adequate private housing for themselves." FHA, he asserted, is "not sufficient stimulus" to get this housing job done.

3. "An all-out local-state-federal attack on . . . slum clearance and urban renewal." Said Stevenson: "Our total government operation in this field is subject to indictment for confusion at the top, for apathy in the middle and lethargy at the bottom. Vital

NEWS continued on p. 45

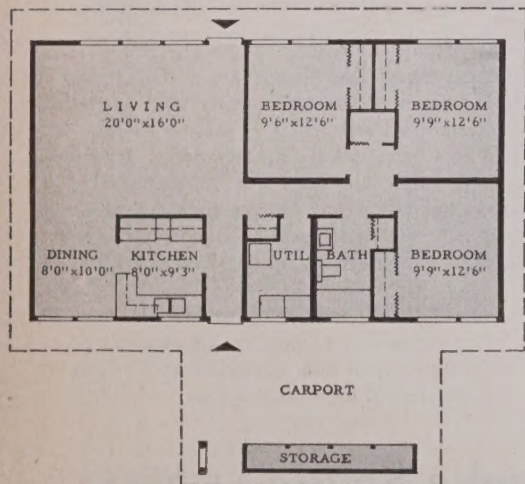
the Fiesta

by style-rite

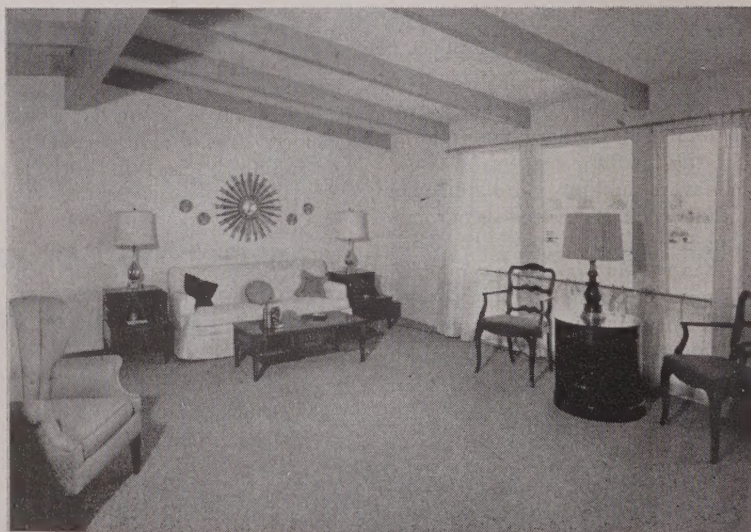


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segments of the federal urban redevelopment program—notably public housing—have now been turned over to administrators who at heart oppose what they are called on to administer. Behind them there is the lukewarm attitude of our highest policy-makers. There is, moreover, a vast confusion of administration that frequently hamstring private investors and builders. Here, certainly, much needs to be done to set our house in order.” Stevenson said state governments are playing “too passive a role” in urban renewal. Unless states can be persuaded to pass laws to let cities attack blight harder, he said the war on blight will take “generations, not years.”

4. **“A two-level attack on traffic congestion to improve our mass transit systems and permit traffic to move freely around and through our cities.”** Stevenson: “Suddenly we realize that what is good for General

Motors is creating more problems than it solves in obsolescent city streets . . .”

5. **“Maximum use by local governments of the tools now in their hands—planning, zoning, building codes, conservation measures . . .”**

Stevenson: “I have detected reluctance on the part of officials to work with the private citizens who are seeking to improve their neighborhoods. This is one area in which people are thinking ahead of the times . . .”

6. **“A closer working relationship between government and private enterprise, based on recognition that the consumer's interest, which is general interest, has to come first.”**

Plumping for metropolitan governments along the lines of Toronto, Canada's (Dec. '53, News), Stevenson said: “We must, in many cases, recognize the need for even a new level of metropolitan government which our old federal-state-city relationship was never designed to encompass.”

New York bans kerosene heaters, sets stiff occupancy standards in new anti-slum code

After nearly 100 crowded public hearings and a year's hard work, the biggest city in the nation passed the most drastic set of anti-slum laws in its history.

Their importance to building lies chiefly in the influence they can be expected to exert over many another city and town across the nation.

As the preface to the new Multiple Dwelling Code says, the code is easily “the most far-reaching program of housing reform legislation ever proposed in New York.” It should go a long way toward taking the profit out of slums. The Real Estate Board of New York objected to the new laws (which affect both landlords and tenants), but asserted that it was “as desirable as anyone to improve conditions of safety and health in old law tenements. . . .”

The most celebrated blot on New York's crowded acres of concrete is a coagulation of 53,348 so-called old-law tenements (built before 1901, when city housing standards were raised) inhabited by nearly one-fifth (1.5 million persons) of the population. Rents are cheap in many of them—from \$5 to \$10 per room per month—but one of the city's biggest property owners remembers being frightened at a public meeting a few years ago when he heard a Puerto Rican priest get up and say that it was not a question of his parishioners not being able to afford medium rents or low rents—they could not afford any rent at all. The problem is compounded by speculative landlords turning excessive profits on the old-law tenements (only 30,000 old-laws have been destroyed since the turn of the century) and thereby promoting blight.

City takes control. New York has never had a code of its own to enforce violations in its multiple dwellings. Since 1929 it has been doing the best it can carrying out the provisions of the State Multiple Dwelling Law. The series of tough new laws now ready for enforcement by the city are certainly not the only ones in the nation. Milwaukee and Baltimore, for example, are notable examples of cities that have

matched or outdone New York's new laws.

In general, the new provisions do this: set up a city multiple dwelling code, with many provisions stricter than the state code; reorganize the department of housing and buildings (hereafter to be known as the Dept. of Buildings); require central heating and hot water plants and outlaw kerosene heaters.

Specifically, they do this:

► Change occupancy standards from a cubic footage to square footage basis. The state formula called for a minimum 400 cu. ft. space for each adult; 200 cu. ft. for a child under 12 years. The new law allows occupancy of the first 150 sq. ft. of area by one adult and a child under four years. The same quota of persons is allowed in each additional 80 sq. ft. Further restrictions prohibit more than two adults from occupying any room for sleeping purposes.

► Make it a criminal offense for both building owners and tenants to overcrowd the premises in violation of the occupancy standards. Penalty: a fine of not more than \$500 or 30 days in jail, or both, for the first offense; a fine of not more than \$1,000 and a jail term not to exceed one year, or both, for the second offense in connection with the same premises.

► Require that owners of tenements (multiple dwellings accommodating three or more families and built before 1929) or converted dwellings to supply heat and hot water from a central source. It covers old-law tenements, too, if they have 10 or more units. Prescribed dates for completion are November of 1958 or 1959, depending on the type of building.

► Continue previously existing prohibitions barring conversion of apartments to single-room occupancy.

► Make kerosene or other fuel oil room heaters unlawful in multiple dwellings. (In the past year, 16 persons died in kerosene heater fires in New York.)

► Amend the city charter to centralize the power of the newly-named Dept. of Buildings in its commissioner, putting the bor-

ough commissioners under his jurisdiction for the first time.

Confusion to come? The Real Estate Board's objections were based on the premise that the code would bring on “confusion of the worst sort, with a plague of disagreements. . . .” The realtors complained about the provision holding an owner criminally responsible for a tenant's violation of the law; objected to a rule requiring an owner to designate some one in the city who would be responsible for the curing and prevention of violations and warned that the central-heating proviso “will not produce the bank loans that will finance the installation of central heating.”

Mayor Robert Wagner had not yet signed one part of the six measures: a bill that would exempt from taxes for 12 years the value of improvements to substandard buildings approved by the City Planning Commission for such rehabilitation and further enable the owner, through tax abatement, to amortize 75% of the cost of such improvements over a nine-year period. Realtors oppose the abatement on the ground it makes one group of owners (and tenants) pay for the benefits of another group.

Lumbermen urged to cut product to fit housing

Lumber manufacturers can get a bigger share of the housing market if they think of it as a major consumer of end-products. PHMI President P. S. Knox, who has urged standardization of building components for years (in line with HOUSE & HOME's Round Table recommendations—April '54 issue *et seq.*) gave this message to directors of the Natl. Lumber Mfgs. Assn. in Washington.

Lumber's biggest weakness in competition with other materials, said Knox, is the industry's “unswerving allegiance to the old American lumberyard standards, with their multiplicity of sizes, lengths, grades and species.” Progress in standardization of dimensions has been too slow. Lumber manufacturers ought to get together more often with home builders to find ways to cut waste and overhead costs. “We could really put you fellows back into the pre-cut dimension business and find good ways together to use up advantageously your culls and shorts,” said Knox.

More research. The 150 NLMA directors voted to expand the association's technical assistance program. Action to come: preparation of a how-to-do-it manual on framing and construction for carpenters and building foremen; publication of more data on the cost of wood construction against other types; a continued effort to keep up to date on research by the forest products industries.

Lawrence D. Kellogg of Alexandria, La. was elected president of NLMA, succeeding Judd Greenman, who was named chairman of the board. Walter M. Leuthold was elected first vice president. Four officers of other associations were elected regional vice presidents: A. L. Helmer (Western Pine Assn.), N. B. Giustina (West Coast Lumbermen's Assn.), Arthur Temple Jr. (Southern Pine Assn.) and Henry W. Jones (Southern Hardwood Producers, Inc.).

NEWS continued on p. 47

How Home Builders Are Cutting Costs with Sherman Diggers — Loaders — Fork Lifts!

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Realtors question huge land write-down grants for slum projects

Is the government squandering taxpayer money with king-sized land write-down grants for big city redevelopment?

Two Los Angeles real estate men, Fred B. Marlow and former NAREB President Charles B. Shattuck, raised that question—and answered it with a loud “yes”—before a House subcommittee investigating housing. The committee, headed by Rep. Albert Rains (D, Ala.) was in Los Angeles winding up a four-city probe which Rains hopes will help Congress revamp housing laws this year. The other cities: New York, Philadelphia (Nov., News) and Chicago.

“Cities,” testified Shattuck and Marlow, “should eliminate their own slums with a minimum of federal money.”

Ploughing under. They cited the Lake Meadows redevelopment project in Chicago (Nov., News) as an example of “costly ploughing under of large city areas” which “will not bring the greatest possible elimination of the worst slums and will not provide a pattern that can be applied on a wide scale.” Marlow said the acquisition cost of Lake Meadows was nearly \$16 million and its reuse value a little more than \$2 million, representing a loss to the public of nearly \$14 million—about \$9 million of it borne by the federal government. *(The project wiped out a pocket of the near South Side's worst Negro slums, but many an expert contends the slum dwellers only moved and*

spread blight into adjacent neighborhoods.)

Shattuck noted that Chicago has 25 sq. mi. more of such areas. “On that basis, Chicago alone will need \$1.5 billion in federal grants—three times as much money as Congress made available for all the cities in the US in five years.”

Tax aids urged. Both the realtors in Los Angeles and James C. Downs Jr., housing and redevelopment coordinator in Chicago, urged more tax incentives for rehabilitation and renewal. Downs suggested exempting individuals who are stockholders of building corporations from federal corporate income tax. He said this would let small investors combine to buy and repair apartments with the same tax liability as if the building were owned by one individual not acting as a corporation. He forecast that such a move would produce millions of new dollars for rehabilitation of old buildings in slum-threatened neighborhoods.

The realtors urged 1) five-year income tax write off for substantial repairs or new building in renewal areas, 2) income tax write off as a loss for the value of obsolete structures demolished by owners, 3) income tax write-off for home repairs by owner-occupants!

VA hit on discounts. High spots in other testimony:

► President Walter Keusder of the Home Builders Institute criticized VA for refusing

to admit money costs more in California than in New York and so refusing to allow discounts over three points in valuations. VA policy, he complained, is “not consistent” with that of FNMA, which pays 1 point more for the same VA mortgage on the eastern seaboard than in Los Angeles.

► Louis H. Boyar, builder of Lakewood Village, urged a 50% cut in “unnecessarily high” FHA processing fees—\$3 per \$1,000 for a commitment and \$5 per \$1,000 for construction inspection. Boyar said his firm paid FHA's Long Beach office in two years, under Sec. 213 alone, \$400,000 in fees—more than it cost FHA to run the entire office “even though we were a small part of their total activity.” Said Boyar: “I doubt if FHA had three men working on our inspections. Inspections are necessary and we welcome them, and the inspectors do a good job, but this tremendous cost is passed on to the home owners. They are not getting their money's worth.”

► Boyar also told of planning a \$2.3 million project for minority groups. “We lost \$42,000 on this idea,” he testified, “discovering that Japanese and Negroes and Koreans and others didn't want to live beside one another, and that none of them wanted to live with whites. So we abandoned the project.”

The committee will go back on the road this year. Rains said he plans to hold hearings in 15 more cities, starting with Toledo this month and running through Easter.

SIDELIGHTS

Housing characteristics

How do your houses stack up against the national trends?

The typical 1955 house, the Bureau of Labor Statistics has just disclosed,* is larger, higher-priced, has more bedrooms than its 1954 predecessor. Comparisons:

ITEM	1955	1954
Median sales price . . .	\$13,700	\$12,300
Average floor area . . .	1,170 sq. ft.	1,140 sq. ft.
Less than 3 bedrooms . . .	23.2%	34.5%
3 or more bedrooms . . .	74%	63.4%
No basement . . .	55.6%	57.6%
Exterior wall construction		
Masonry	20.2%	13.6%
Brick facing	12.2%	7.5%
Concrete block	4%	3.1%
Frame	77.1%	81.7%
Wood facing	28.9%	31.4%
Brick facing	18.3%	19.5%
Asbestos shingle	7.6%	13.8%
Brick & wood facing	8.5%	4.6%
Selling price		
Less than \$7,000	7.1%	10.6%
\$7,000-\$9,999	10.7%	14.8%
\$10,000-\$11,999	15.9%	20.7%
\$12,000-\$14,999	29.1%	24%
\$15,000-\$19,999	23.2%	16.5%
\$20,000 & over	10.2%	9.7%
Unknown	3.8%	4.4%

Regional differences, as usual, were marked. In the west, 52% of 1955 homes had fireplaces, compared to only 19% in

the South, 22% in the North Central states and 26% in the Northeast. Frame construction was weakest in the South (61%) where brick construction was strongest (36.9%). Basements were strongest in the Northeast (91.4%), weakest in the South (21.5%) and West (28.5%).

Nationally, there was a shift in favor of aluminum window frames, with use of wood and steel declining somewhat. Panel interior doors lost ground to flush doors.

Windfall for public housing?

Builder Fred C. Trump, unable to put up a proposed apartment development near New York's famed Coney Island after FHA blacklisted him on 608 windfall charges, agreed to sell his 29-acre site for public housing. The New York City Housing Authority plans to erect 1,500 units renting for \$21 a room—so-called “middle-income” housing for which the city grants tax exemption on the \$21.5 million of proposed improvements. Trump reportedly paid \$1,451,000 for the acreage, will sell for \$1,500,000.

FHA loans for trailer parks

FHA announced it will insure mortgages on trailer parks big enough to include at least 50 trailer sites. And at least 80% of the individual sites in each park must be 3,000 sq. ft. in area; the rest at least 2,400 sq. ft. The space standards, said FHA, will enable the trailer owner to park

his car on the site and enjoy “conveniences home owners usually enjoy.” Limitations: \$300,000 per mortgage, \$1,000 per trailer space and 60% of the estimated property value after improvements. Top maturity is 10 years; top interest 4½%.

GM denies housing plans

General Motors—whose stepped-up promotion and sales effort in appliances has the house building industry talking—has no plans to build houses.

That's what G.M. Chairman Alfred P. Sloan Jr. told Senate investigators last month during their inquiries into the giant corporation. Sen. Joseph O'Mahoney, making a last try about G.M. expansion, asked: “When are you going to build houses?” Laughed Sloan: “I don't think we'll go that far. . . . We're not interested in expanding just to expand.”

Discounts—FHA style

What the nation's 75 FHA district offices think are the going discounts on Sec. 203 mortgages has been revealed by FHA Boss Norman P. Mason. The Nov. 1 picture:

US average	98.2	Zone I	par
Zone II	98.6	Zone III	97.6
Zone IV	98.3	Zone V	97.7
Zone VI	97.9		

The figures, FHA explained, are unweighted averages of FHA field office opinions for typical 203s for immediate delivery. FHA said prices had dropped steadily from 99½ in January, but were still above the 97.1 bottom of the 1953 mortgage crisis.

NEWS continued on p. 49

* “Characteristics of New Housing, First Quarter 1955,” Bureau of Labor Statistics, Washington 25, D. C.



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MORTGAGE QUOTATIONS:

Money pinch no worse, warehousing a bit easier

The mortgage market changed only slightly from November to December. "Not a bit worse," commented one of HOUSE & HOME's correspondents (see table, below), adding that there was not enough distress paper being unloaded to materially affect the market. Others noted good activity and "more selling in the bottom range."

The local market for FHAs in Philadelphia reached par, but it was noticeable that big builders still had to pay discounts. A \$15 million deal went at 97½. Mortgage men agreed that insurance companies were ready to snap up good conventionals—and predicted that interest rates for these would certainly not soften in months to come. "It's not so much a desire to balance their portfolios," said one. "What it means is they're trying to get a better yield situation."

The flurry of complaints over the Federal Reserve's stand on warehousing was subsiding. One expert summed it up: "The banks in New York are talking the roughest game you ever heard, but when one of our local bankers puts the heat on, they come through."

(Sale by originating mortgagee, who retains servicing.)
As reported to HOUSE & HOME the week ending Dec. 9

FHA 4½s (Sec. 203) (b)

City	Maximum old terms* Immediate	Maximum new terms†		25 year, 10% down	
		Immediate	Future	Immediate	Future
Boston local	a	101	101	a	a
Out-of-state	96½-98	97-98	97-98	98½ ^b	a
Chicago**	97-98	99	99	99-par	99-par
Denver	a	99	98½	99	98½
Detroit	97-98	98-99	98	98-99	98
Houston	98-par	98-par	98-par	99-par	99-par
Jacksonville	97-98	97-98	97	98-99	98-99
Kansas City	par	par	98	par	98-99
New York	99-par	99-par	99-par	99-par	99-par
Philadelphia ^d	par	par	par	par	par
San Francisco	99-par	99-par	—	98-par	—
Washington, D.C.	98-99	98-99	97½-98½	98-99½	97½-98½

* 30 year, 5% down on first \$9,000

† 25 year, 7% down on first \$9,000

VA 4½s

City	30 year, no-down		25 year, 2% down		25 yr. 5% down or more	
	Imme- diate	Future	Imme- diate	Future	Imme- diate	Future
Boston local	par-101	par-101	par-101	par-101	par-101	par-101
Out-of-state	94-95½	a	96-97	96-97	96-97½ ^b	96-97½
Chicago	96-97	96-97	97-97½	96-97	99	98½
Denver	a	a	98½	98	99½	98
Detroit	95½-96	95	96½-97½	96	97-98	97
Houston	96-7	96	96-7	97	98-99	97½
Jacksonville ^c	96-7½	96-96½	97-98	97	98-99	98-98½
Kansas City	97	97	97	97	97-98	97-98
New York	99-par	—	99-par	99-par	99-par	99-par
Philadelphia	98-98½	98-98½	99	99	99½-par	99-par
San Francisco	96-98	95-97	—	95-97	98-99	98-99
Washington, DC	96½	96	97-8	96½-97½	98	97-97½

Immediates covers loans for delivery up to 3 months; future covers loans for delivery 3 to 12 months.

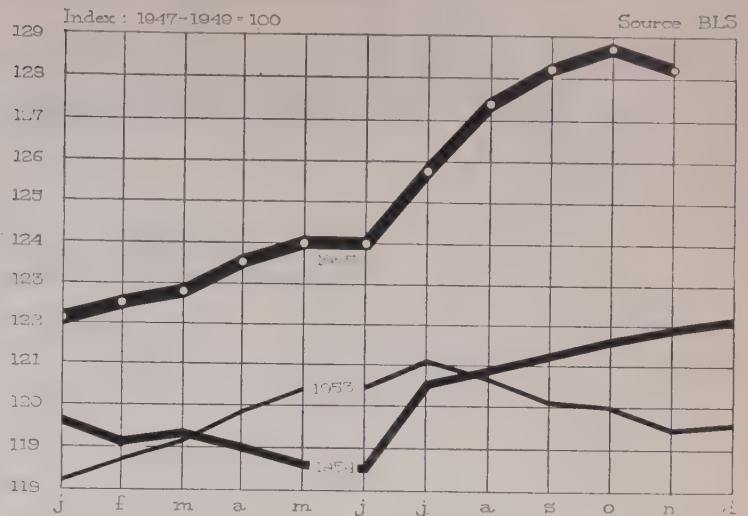
Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones.

Quotations refer to houses of typical average local quality with respect to design, location and construction.

** Prices to builders average 1½-2 pts. lower to cover origination fee and construction payout charges. a—no activity. b—very limited market at this price. c—covers typical package deal, with builder permitting only 10-33% of a block of mortgages as no-downs. d—price to builder adds ½ point; plus 1 point by veteran. e—5% down, 30 years at 97½-98. f—25 yr. loans.

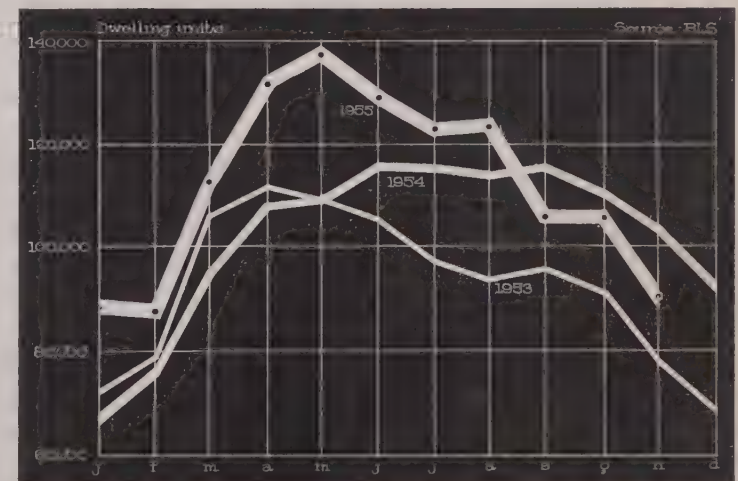
SOURCES: Boston, Robert M. Morgan, vice pres., Boston Five Cents Savings Bank; Chicago, Maurice A. Pollack, vice pres. & secy., Draper & Kramer, Inc.; Denver, C. A. Bacon, vice pres., Mortgage Investments Co.; Detroit, Stanley M. Earp, pres., Citizens Mortgage Corp.; Houston, John F. Austin Jr., pres., T. J. Bettes Co.; Jacksonville, John D. Yates, vice pres., Stockton, Whatley, Berens, Inc.; Kansas City, Byron T. Shutz, Sr., pres., Herbert V. Jones & Co.; New York, John Halperin, pres., J. Halperin Co.; Philadelphia, Laurence J. Stabler, vice pres., W. A. Clarke Mortgage Co.; San Francisco, William A. Marcus, senior vice pres., American Trust Co.; Washington, D. C., George W. DeFranceaux, pres., Frederick W. Berens, Inc.

BUILDING MATERIALS PRICES



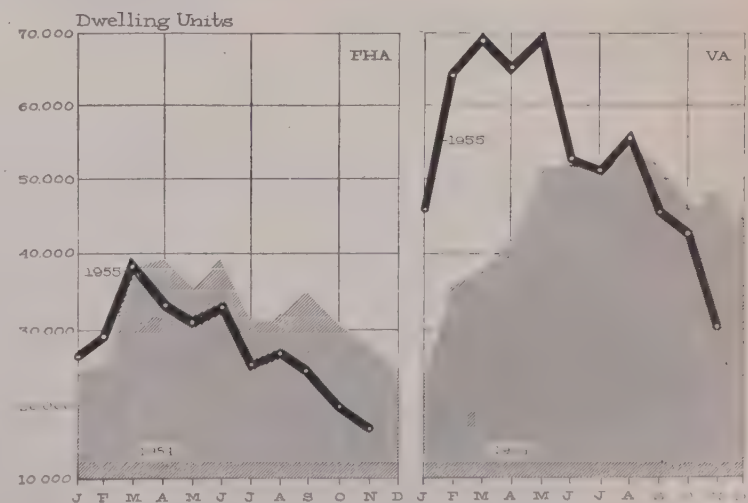
The 18-months-long rise in building materials prices broke in November with a drop of 0.5 points. The greatest plunge was in prepared asphalt roofing, down nearly 14 points, BLS reported. Producers called it a seasonal change. It might also mean that manufacturers were unloading an oversupply. Other prices were stable except for plumbing equipment, which rose 3.6 points.

NONFARM HOUSING STARTS



Housing starts fell to 90,000 in November (89,200 private, 800 public). It was a drop of 17,000 from October. This left the pace at 1,203,000 on a seasonally adjusted annual basis.

FHA AND VA APPLICATIONS



FHA applications in November sank to only 16,921 units—nearly 3,000 under the October figure. VA requests, which had been close to 70,000 during last year's big boom, were down to 30,397.

NEWS continued on p. 52

Planning a New Lift to Living

FROM FRIGIDAIRE!

Here from Frigidaire are the most-talked-about appliances on the American scene today — the new Lift to Living refrigerators, ranges and laundry products that in the past few weeks have drawn the greatest store traffic in Frigidaire history.

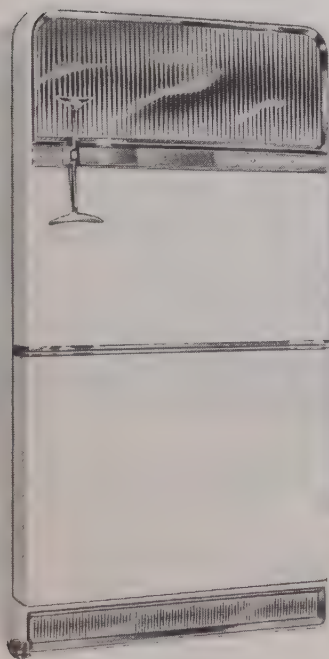
Completely new in design, in color, in features *never before offered*—these products reflect the dynamic new thinking of Frigidaire and General Motors' great Technical Center.

In color, in special design, you will find the

new Frigidaire appliances an inspiration to work with and already "sold" to your clients and customers.

And remember, in addition to these appliances, Frigidaire also has a complete line of Residential Air-Conditioning equipment, including air-cooled and water-cooled units for add-on, combination, separate or remote-type installations.

Send today for literature and specifications to Frigidaire Division, General Motors Corp., Dept. HH1, Dayton 1, Ohio.

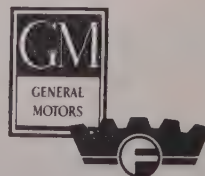


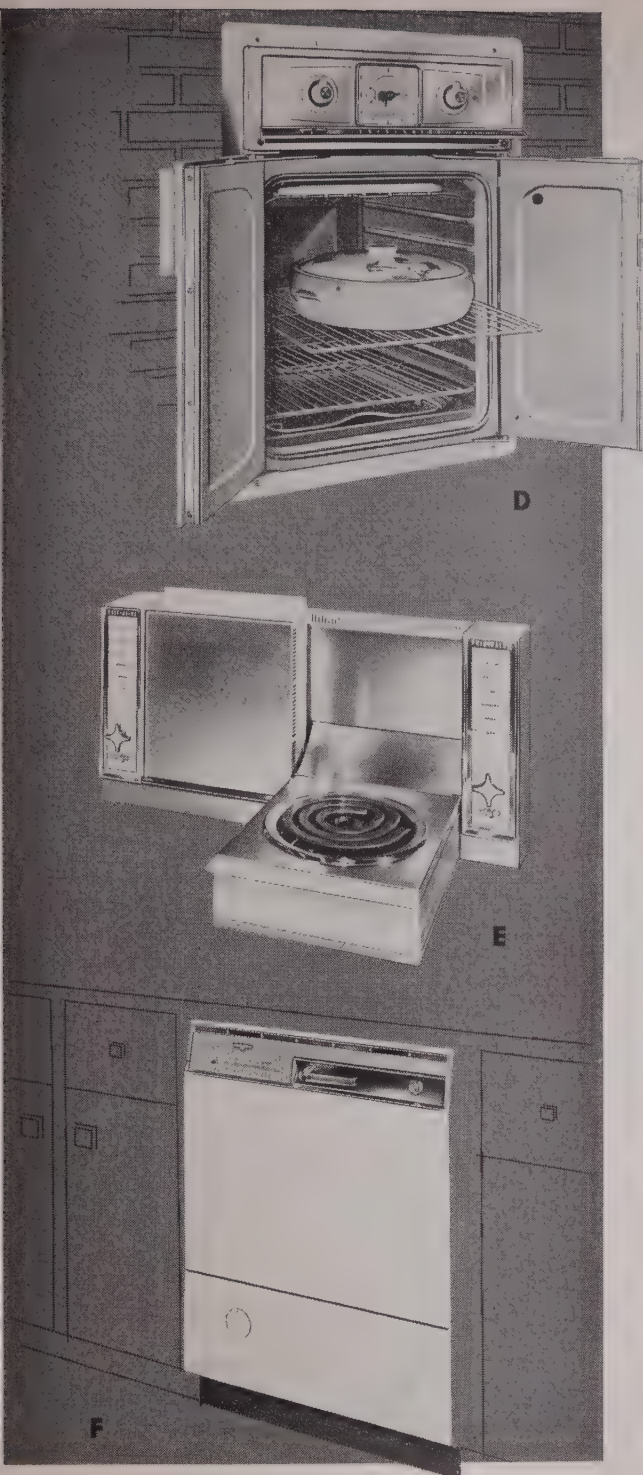
For 1956

MAKE YOUR NEW HOMES FIRST WITH

FRIGIDAIRE

You are cordially invited to visit
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at the National Association of
Home Builders Convention
Conrad Hilton Hotel, Chicago, Illinois
January 22-26, 1956





A. Frigidaire Cold-Pantry Food Freezer-Refrigerators—Completely new in colorful beauty, with new Ice-Ejector that delivers cubes — by the trayful—into a storage basket. Choice of colorful Decorator Panels to match any kitchen color-scheme. Shelves that roll out *all* the way. Frozen food compartments that hold up to 168 pounds, with Roll-to-You Shelves. Picture Window Hydrators that hold a week's supply of fruits and vegetables. A complete '56 line in prices and colors.

B. Frigidaire Imperial Electric Ranges—The ranges with the "Thinking Top" that tends to all timing and watching. Exclusive! New Miracle Filter that makes oven smoke and fumes vanish into thin air. The Heat-Minder Unit that prevents foods from burning—keeps pots from boiling over. Ovens with "French doors" that open with a single pull and that roll the roast out into easy-tending position. The Speed-Heat Unit that cooks faster than ever. AND—at last—a real, honest-to-goodness, automatic ROTISSERIE!

C. Frigidaire Imperial Automatic Washers and Electric Dryers—The Laundry Pair that gives the piece-by-piece care of "hand laundering." Live-Water action that gets clothes clean—in less time—and with less water. Wash and rinse water is *automatically* cleaned. Float-Over Rinse carries dirt and soil *up and out*—instead of *down and through* the wash load. Clothes come out of the matching Filtra-matic Electric Dryer fluffy, fresh and clean-smelling—all without work, watching or worry!

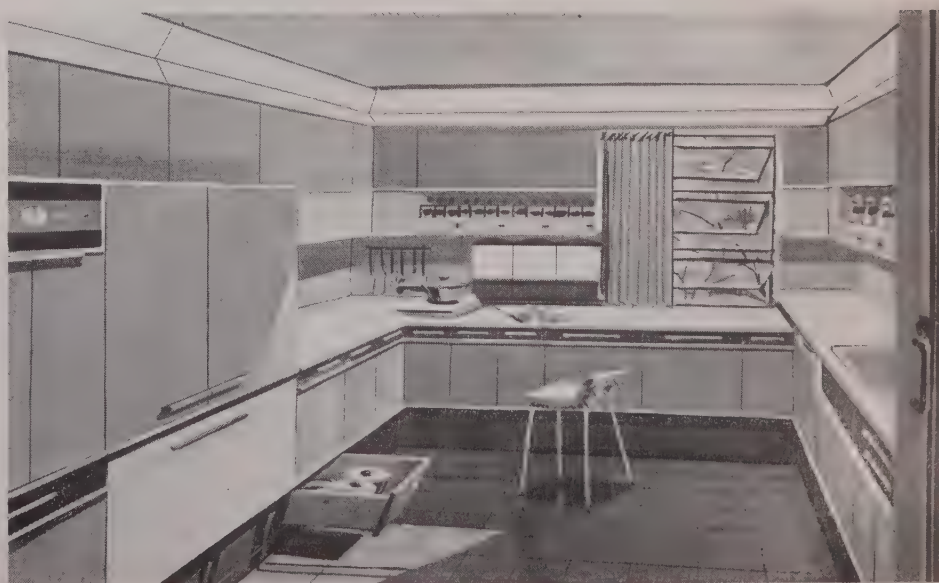
D. Frigidaire Imperial Wall Oven—The Frigidaire Imperial Wall Oven meets a vastly growing trend in home building. In stunning, easy-to-care-for stainless steel, it gives all the same fine baking, roasting and broiling results of Frigidaire's finest ranges—because it's the same oven. Automatic rotisserie optional at extra cost.

E. Frigidaire Fold-Back Surface Units—Here are really practical space savers! Frigidaire Fold-Back Surface Units fold up and back when not in use. Cooking space and counter space are one and the same! One 6-inch and one 8-inch unit in each section. New, easy-to-see Heat Controls.

F. Frigidaire Automatic Dishwasher—Push the button—and the dishes are done! The Frigidaire Automatic Dishwasher has a huge capacity—dinner dishes for eight, *plus* cooking utensils. Exclusive Turbo-Spray Action gets dishes sparkling clean. Three models: Freestanding, Under-Counter, and 48-inch Sink-and-Dishwasher.

THE FRIGIDAIRE HOLIDAY KITCHEN

Here dreams become a *fact* for architects, builders, *and* Mrs. America! The Frigidaire Holiday Kitchen is a complete, integrated kitchen, styled as a unit in modular dimensions. Fits any area, almost any shape—permits a host of arrangements — with floor-to-ceiling completeness. It backs to an unfinished stud wall — or makes its own partitions. The many constructive economies and advantages — the new buyer appeals—of the Frigidaire Holiday Kitchen are well worth your inspection at the convention. This new kitchen will be available late in 1956. Be sure to see it now.



PEOPLE: Charles Mattoon named FHA operations boss;

Charles Abrams to head race relations drive in NY

FHA took another whack at improving the morale and "grassroots effectiveness" of the agency by appointing a new assistant commissioner for operations.

Charles S. Mattoon, director of examination and audit, was moved into the post. **Henry M. Day** moved out. Day, former FHA boss in Utah, was brought to Washington 14 months ago specifically to work up a feeling among field office personnel that they had the backing and assistance they needed from headquarters. It was a tough job. As one observer commented: "Morale was so bad it would have taken a superman to do it." Day is credited at least with reducing the application backlog that plagued the office.



MATTOON

Mattoon came to FHA not as a housing or mortgage expert, but as an analyst of management procedures and personnel control. After 20 years as industrial relations director for the airplane Division of Curtiss-Wright Corp., he worked for private concerns and later helped organize a program for the Civil Defense Administration.

Other moves in the housing agencies:

► **Joseph H. Ehlers**, for the past six years field representative for the American Society of Civil Engineers, was named assistant commissioner for technical services with the Urban Renewal Administration. He is an engineer and lawyer with experience with federal public works programs and private engineering jobs—here and abroad. He is co-secretary of the joint committee of ASCE and the American Institute of Architects.

► **Walter S. Fried**, general counsel for HHFA in the New England-New York district for the past year, was appointed regional administrator for the area. **William D. Jones**, who has been acting regional administrator, continues as regional director for the Community Facilities Administration.

► **Atty. James E. Kerwin**, a sales executive with a large automobile agency in Memphis, was named director of the FHA office there. He succeeds **Sterling Roberts**, who resigned last summer because of ill health.

Gov. **Averell Harriman** of New York made two appointments signalling a new campaign against racial discrimination in housing.

Charles Abrams, globe-trotting (for the UN) housing expert, author of at least six books on housing and urban problems and state rent administrator for the past year, was named chairman of the State Commission Against Discrimination. His successor as rent boss is **Robert C. Weaver**, who has been deputy commissioner under **Joseph P. McMurray** in the state division of housing for the past year. Weaver is the first Negro appointed to cabinet rank in the state of New York.

Abrams takes a salary cut in his new post. The rent job pays \$17,000 a year, plus \$3,000 in lieu of expenses. The chairmanship of SCAD

pays \$13,700 plus expenses but might be raised in the next legislature. Salary aside—and Abrams is not one to be unduly worried over this—the appointment looked like a case of getting a seasoned public servant to put new life in a public agency. A close associate, asked what he thought Charlie was going to do in the new job, replied: "I don't know, but you can be sure the agency will never be the same again." One chance of a change: Gov. Harriman said he planned to ask the legislature to put the state law barring segregation in government-insured projects (effective last July 1) under jurisdiction of SCAD. An informal committee headed by Former Air Force Secretary **Thomas Finletter** has been in charge of administering the law until now.

Weaver holds three degrees in economics from Harvard University and has been a visiting professor at New York University, Columbia Teachers College and a night school branch of Northwestern University in New York. Before that he spent 11 years in government service, as a consultant with the Public Works Administration and as special assistant to **Nathan Straus** at the US Housing Authority (PHA's predecessor). Weaver has written two books himself: "The Negro Ghetto" (1948) and, earlier, "Negro Labor." He is a member of the executive committee of ACTION and vice chairman of NAACP.



WEAVER

Builder **Gerald A. Hoytt**, head of the 4,000-home Marinwood project near San Rafael, Calif. filed a \$500,000 suit against a home building firm for "copying" one of his houses. Hoytt charged that **Heraty & Gannon**, contractors in the East Bay area and Sacramento, are building moderate-priced homes called "Country Squire Barns" in a project in Sacramento. Hoytt contends that he and Los Angeles architect **James R. Friend** worked up the design which is exclusive with him and that he told the contractors so. The suit also asks that Heraty & Gannon be enjoined from copying Hoytt's "intellectual productions." A Heraty & Gannon spokesman said their house is "substantially different."

James Felt, 52, real estate broker and civic leader, was appointed \$22,500-a-year chairman of New York's city planning commission—the nation's highest-paid planning job. He will succeed Col. **John J. Bennett**, who is retiring.

Felt said he was resigning as president and director of his Manhattan realty firm, but will retain the controlling stock ("the company has never had any dividends—all the earnings go into salaries"). Felt, described by Mayor **Robert Wagner** as an "old friend," has been serving as an unpaid board member of the New York Housing Authority. Among his other activities, he is president of the New York Urban League, vice president of the Federation of Jewish Philanthropies.

CORPORATE CHANGES: **F. H. Peters**, ad manager of **Frigidaire** for the past ten years, took over as president and principal stockholder of the **Sphar Brick Co.** in Maysville, Ky.; **Glenn S. Cooper**, former consultant on machine accounting to the Treasury Dept. and the Army Finance Dept., was named general manager of **Place & Co.**, builders and developers in South Bend, Ind.; **E. J. O'Leary**, was elected executive vice president of The Ruberoid Co.

United States Steel Homes, Inc., US Steel's prefabricated subsidiary, retained **Housing Securities, Inc.** of New York (**Thomas P. Coogan**, president) as consultant on market analysis and merchandising.

DIED: **Martin L. Houseman**, 66, Los Angeles real estate developer who participated in creation of the Westchester district, Nov. 17 in Los Angeles; **Harry H. Hall**, 61, a past international president of the Society of Residential Appraisers, Nov. 22 in Bloomington, Ill.; **Edward Henry Delafield**, 75, president of the real estate firm of Delafield & Wheeler in Darien, Conn. and former member of the New York Stock Exchange, Dec. 1 in Stamford, Conn.; Famed Architect **Julius Gregory**, 80, winner of several architectural awards (including AIA's gold medal), whose long career included design of several nationally-accepted home designs for consumer shelter magazines, Dec. 4 in Ringoes, N.J.

NEWS continued on p. 55



H&H to give diplomas for 56 winning houses

Certificates of award like this one will be presented to builders and architects of the 56 houses picked by HOUSE & HOME last fall for their "contribution to housing progress" (Oct. issue). The builders and their architects will be feted at a H&H lunch during the NAHB convention in Chicago this month. Photographs of the winning houses, now on exhibit at NAHB's National Housing Center, will also be exhibited at the convention. A 12" enlargement of the sunburst which appears on the diploma will be distributed to advertisers whose products were featured in any of the houses for use in booth displays.

The best house program proved such a success that it will be repeated in 1956 when HOUSE & HOME hopes even more builders will enter their houses for consideration. Entries will close in July and the 57 best houses for '57 will be published in October.

REVIEWS:

How Chicago fought on sites for public housing

POLITICS, PLANNING AND THE PUBLIC INTEREST, by Martin Meyerson and Edward C. Banfield. 353 pp, \$5, published by The Free Press, Glencoe, Ill.

Few people in Chicago will soon forget the no-holds-barred struggle over public housing which lasted some 30 months in 1949-1951.

It began when the Chicago Housing Authority laid down on Mayor Martin H. Kennelly's desk a proposal to build 40,000 units of low-rent housing over a six-year period. President Truman's signature on the new Housing Act of 1949 was hardly dry; new housing in Chicago was undoubtedly needed; here was a political-ideological plum to make the most of. Before the affair was over every variety of Tom had his thumb in the pie.

During the ensuing 30 months the nation was treated to an involved and complicated battle over site-location, especially over the racial aspects of CHA's program. It became a cause célèbre among public housers; their conventions resounded with ain't-it-awful resolutions. It coalesced both pro- and anti-public housers into articulate pressure groups.

Fortunately for posterity, Meyerson and Benfield had access to a vast array of sources: to Meyerson's own experience as CHA planning director, to a mass of unpublished interviews, to letters both personal and official, and to the usual published papers. They follow the tuning, twisting struggle so closely that many a participant in that struggle will straighten up from this book exclaiming, "So, that's what was going on!"

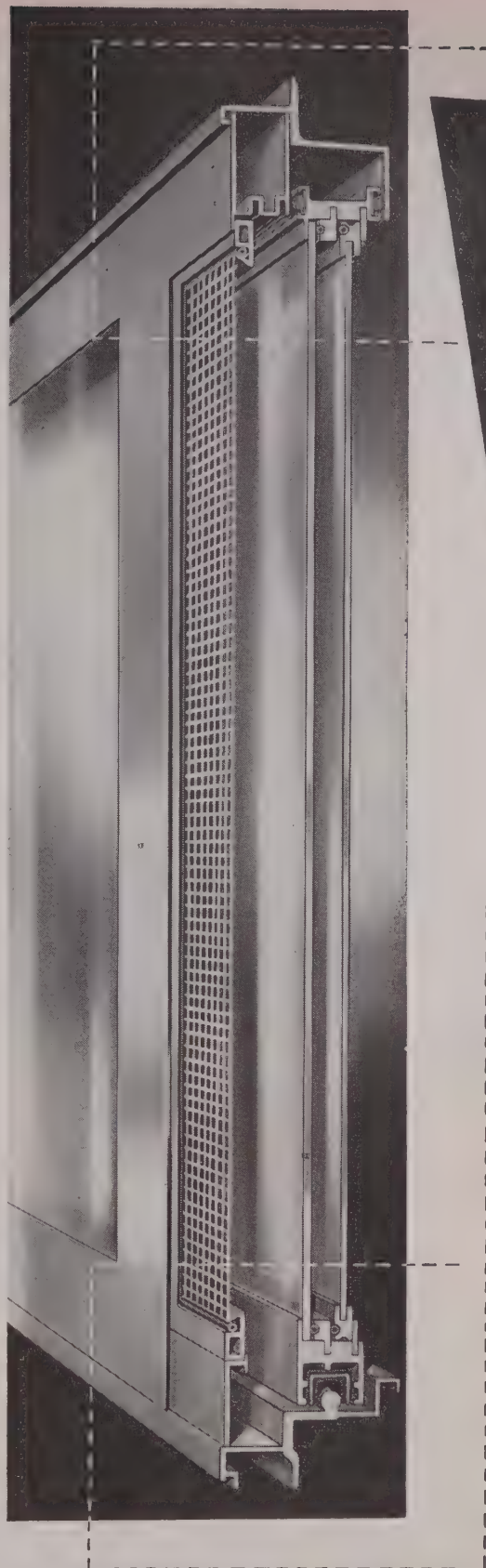
This is a detailed and documented study of "decision-making processes," a generally readable account of the often hidden motives, pressures and personalities in the Chicago struggle.

Do the Chicago lessons fit elsewhere? Say the authors: "The Chicago experiences should sensitize the reader to certain influences and relationships which are likely to be found . . . in other cities." For planners, public and private housers (and all housing controversialists), for politicians and students, this book may become a classic.

US Chamber publishes urban renewal manual

URBAN DEVELOPMENT GUIDEBOOK, prepared by the US Chamber of Commerce, 102 pp., \$1, US Chamber of Commerce, Washington 6, D.C.

What to do about blight, congestion and the high cost of city management is set down in this quote-filled report. A good part of the information was gathered at conferences held last year in six cities—Birmingham, Columbus (Ga.), Dayton, Houston, Sacramento and Worcester, Mass. The pamphlet bears down hard on "the capacity of civic-minded citizens to face and solve problems which at first seem insurmountable," is therefore a useful addition to the increasing bookshelf of how-to-do-it guides on urban renewal.



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● You can spot a Thyer open house a mile away! . . . brilliant Thyer pennants and streamers mark the beginning of a banner year.

And behind every Thyer "open house" lies weeks of carefully planned local promotion guaranteed to put house hunters in a buying mood. Newspaper ads and radio or TV commercials, plus display cards, mailing pieces, etc., all help to pre-sell your local market.

Any or all of this material is available through your nearest Thyer Homes representative. Get together with him soon and let him show how Thyer promotional support can help to make this year your biggest ever for sales and profit.

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DEFENSE HOUSING REVISITED:

Foreclosures, vacancies in Savannah River rental projects reveal fiasco by planners

by George McMillan

The final chapter in the checkered story of housing at the Atomic Energy Commission's Savannah River H-Bomb plant can now be written.

In August 1953, HOUSE & HOME took a look, found AEC's schemes for housing its construction force in barracks and trailers had gone wastefully awry. But as for the "permanent" FHA Title IX defense housing, HOUSE & HOME then concluded that "final evaluation . . . must await completion of the plant and adjustment of the area to a normal existence." The plant is now finished, the construction force has departed to leave the vast installation to the 8,000 technicians who are operating it. And the area has returned to a normal existence.

Lost cause. But today the Title IX program looks like the most wasteful chapter in the Savannah River housing story. "It's gone sour," in the words of one government housing official. In those of another it is "a lost cause." Informed estimates put the government's final loss at somewhere between \$15 and \$20 million.

HHFA programmed 3,223 rental units, committing the government to \$25,620,950 in mortgage guarantees. The units were scattered in 38 projects in seven towns outside and around the periphery of the plant tract. Most of them were completed in 1952.

Today all but a handful of these 38 projects are "in distress." The government, either FHA or FNMA, has accepted title to 1,019 of the 3,223 units programmed originally by HHFA. An additional 221 Title IX units are in process of being foreclosed by FNMA. And owners of at least another 750 units have discussed terms on which they could hand over their deeds to FNMA.

Less than half the units are occupied. And that figure would be more dismal if some 500 of the units had not been sited on the "wrong side" of Augusta, Ga. These homes, too far away for plant commuters, have been taken over by the Army's Camp Gordon for soldiers.

Two survivors. Aside from those in Augusta, the only other Title IX projects which seem likely to stay out of the government's hands for as long as the coming 12

months are Gross-Morton's Crosland Park (337 units) in Aiken, S. C. (H&H, May '52) and two projects in north Augusta, S. C.—Lynnhurst (141 units) and Pete Knox's Summerfield (300 units). And the hope for the north Augusta projects lies in the growth of metropolitan Augusta and the accompanying need for low-rent housing.

As for the rest, nobody sees much chance for their use—most of all not FHA's state office in Columbia, S. C., which has been puzzling and sweating over the problem for several months. For that long they've already had on their hands projects in the tiny South Carolina hamlets and towns of Barnwell (400 units), Blackville (100 units), Allendale (100 units) and Williston (150 units).

The one thing that nobody is likely to say about the Title IX program at Savannah River is that the builders involved came upon a windfall. With Title IX's 90% loan to value ratio, some builders may have mortgaged out in constructing the projects. But the more typical story seems to be that the construction profit was often wiped out, or diminished, by, as one of the builders ruefully admitted, "holding on too long."

"I kept advising my clients to turn the projects over to the government," said a lawyer who represented several builders. "But they just couldn't believe what was happening, or at least refused to believe that what did happen could have happened so quickly. So they kept holding on, away



EXTREMES to which some owners of rental defense housing projects go to find tenants are indicated by this ad which appeared recently in the Augusta Chronicle.

EMPTY DUPLEX UNITS at Governor Aiken Park, Aiken, S. C. typify the plight of defense housing around the Atomic Energy Commission's H-bomb plant nearby. Less than half of the 244 units in the project were occupied last month, although rentals for two-bedroom units have been cut from \$75 to \$49.50. Owner Nathan Cabell of Charleston, S. C. was negotiating with FNMA to turn some units back.

past the time when they should have cut loose."

Although AEC pushed the local HHFA representative to program far more than the 3,223 units he did approve in the fall of 1951, those 3,223 were never full. What's worse, large scale vacancies occurred long before they were expected, in less than two years after the houses were built in 1952—in late 1954 and early 1955.

Wrong locations. But on one point—and it has turned out to be a disastrously wrong one—AEC prevailed over HHFA. AEC wanted the Title IX projects dispersed through what AEC liked to call fancifully, "the existing communities" of the area.

Determined not to build another government town and resolved to rid itself of congressional criticism for such non-atomic activities, AEC appears to have conceived the notion that it could at least talk as though the little towns nearby could absorb the impact it knew the plant would cause.

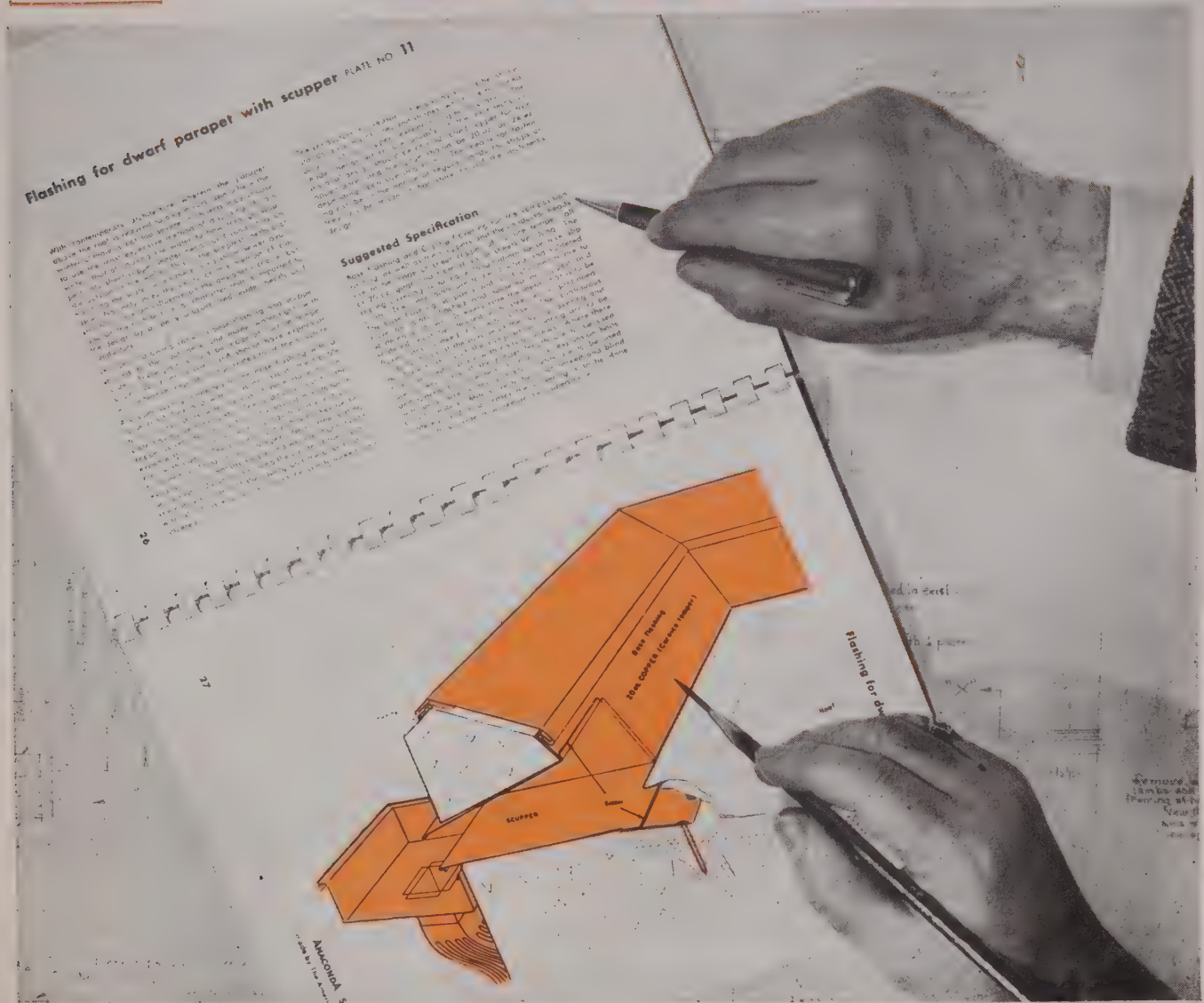
In fact, however, communities like Blackville, Barnwell, Allendale and Williston looked bleak and uninviting to outsiders; construction workers lived in these towns only as long as they had to. Permanent workers, with a handful of exceptions, have simply refused to take up residence in them. Today it is not difficult to get unofficial, if begrudging, agreement from both AEC and HHFA and FHA officials that location of the Title IX housing was bad, if not one of the major reasons for the Title IX fiasco.

But there is at least one other reason. In Aiken, long time winter resort so highly preferred by plant personnel that it has now become a "company town," there are still vacancies in, and foreclosures on, Title IX projects. Virginia Acres (213 units) and Vanwood (55 units) have both recently been turned over to FNMA by their owners.

Worst to come. The reason why the Title IX story is getting worse, and probably will get still worse lies in the intangibles of sociology. It is plain to local real estate men in, say, Aiken that what has happened there is that the families who may have lived for a few months in Title IX units,

NEWS continued on p. 59

NEW guide to modern sheet copper practices



104 pages of detail drawings—recommended practices—suggested specifications

Many new drawings—latest information. This new book has the basic construction details previously issued—plus many new drawings and recommendations reflecting current trends in contemporary architecture. All details and specifications embody up-to-date knowledge concerning the use of copper in sheet metal work.

Easy to use. It opens easily, lies flat. The recommended practices and suggested specifications are on the page facing the drawing. Subjects are easy to find, as drawings are in a logical sequence according to type of detail.

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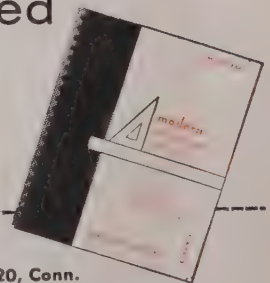
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built their own homes. Many of these atomic nomads have been transferred as often as once a year, or once every two years, since 1942, and have lived most of that time either in government towns, or have rented in suburbs or large metropolitan areas.

"It's not that we aren't going to be transferred again," said one AEC chemist, who recently bought a home. "We know we probably will be. But if we were ever going to own a home, this seemed like the time. We weren't forced to live in a government town. Land was cheap, and building costs relatively so. Mortgage money was available. Aiken was a nice town, one our wives liked. Our families were getting larger, and, frankly, we were just fed up with project life. Our wives were screaming for a place to put their 'things,' a place to hang some draperies. So, a lot of us fellas who had lived in places like Oak Ridge, Los Alamos and Hanford decided that Aiken was the place to make the dive into home ownership."

This is probably as good an explanation as could be found for why, while paint peels on some not unattractive Title IX projects, Aiken and north Augusta have been undergoing for a year, and continue to undergo today, building booms in homes in the \$13,500-\$20,000 price bracket.

FHA studies converting sick 608s to public housing

Realtors have been talking of converting public housing into cooperatives. But FHA, meanwhile, is on the verge of approving two deals to turn private housing into public housing.

Involved are two repossessed Sec. 608 projects, Jackson Heights at Montgomery, Ala., and Sabal Palms at Miami. The 184-unit apartment at Montgomery was built as a Negro rental project. But it was—FHA admits—shoddily built because of Korean-war materials shortages. Vacancies have kept it in financial hot water almost from the time it was completed.

Under a deal which FHA says is "definitely pending," the Montgomery housing authority would buy the project on a negotiated bid. Public housers say it will cost nearly \$2,000 per unit to repair the building to bring it up to public housing standards.

Conversion of the 340-unit Sabal Palms projects at Miami to public housing is still in what FHA calls a "preliminary stage." So far, FHA has taken over only two of the three sections of the project, each of which is covered by a separate mortgage.

Architects vote to boost their public relations fund

The American Institute of Architects will spend \$160,532 to promote public relations next year.

That is \$53,000 more than the \$107,683 AIA plunked down to promote public recognition of architects this year. The stepped-up program was approved at AIA's board of directors meeting in New Orleans. Biggest item: \$77,000 for the institute's relations counsel, Ketchum Inc. of Pittsburgh.

The professional publicists plan to help local chapters put on TV and radio programs, wangle more stories in the press, give local chapters advice on lobbying.

NEWS continued on p. 64



Residence of J. C. Davidson, Manager, Application Engineering Department, Airtemp Division, Chrysler Corporation, Dayton, Ohio. Completely air conditioned with Airtemp equipment and Kno-Draft Overhead Air Diffusers.



Living room has two Kno-Draft Diffusers. Air distribution system and fan-coil unit are located in attic. The condensing unit is at rear of house.

*Why
Air Diffusers
are making
grilles obsolete*



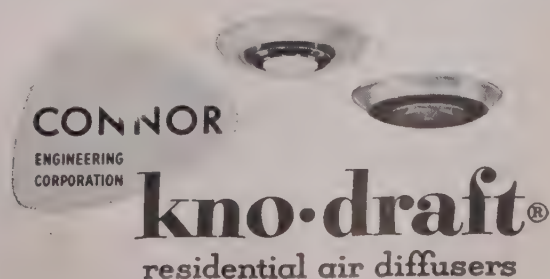
In the dining room and kitchen, Kno-Draft Air Diffusers with integral lighting fixtures are used. These are available in a variety of styles, and may also be adapted for dropped lights.

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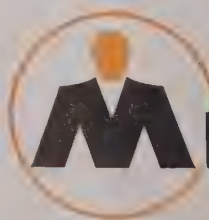
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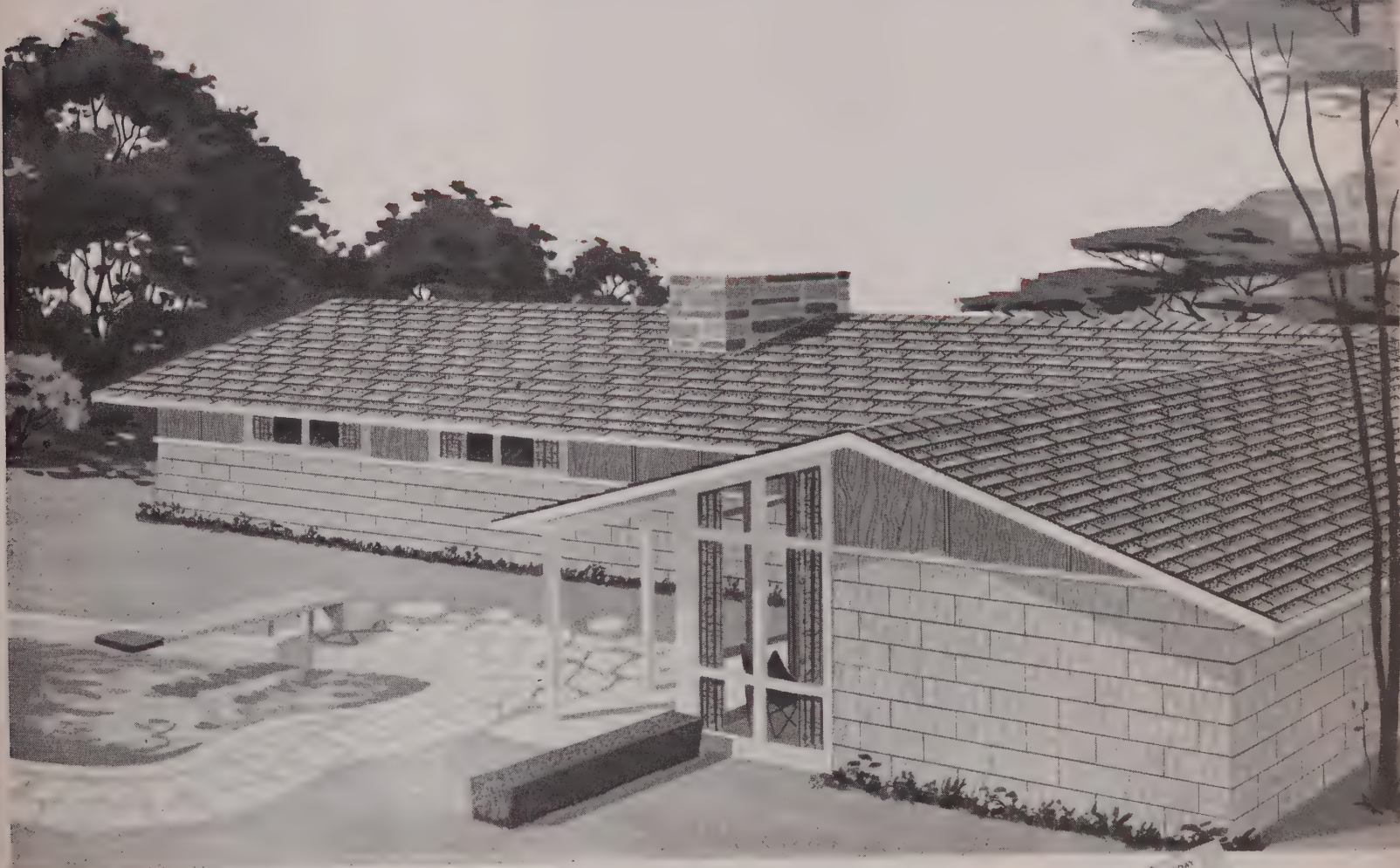
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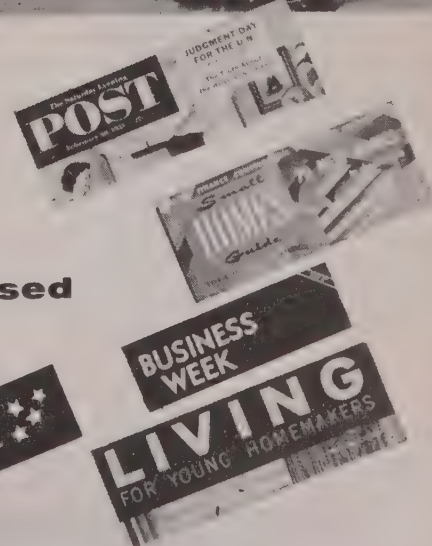


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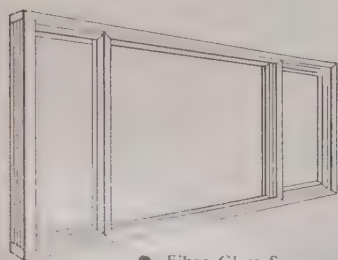


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plans for a new industrial area near the airport and rezoned a section for that purpose. But last spring officials gave in to the Navy's warning and rezoned everything within 12,000' of the base as out-of-bounds for residential construction. And plans for the industrial area were knocked out by a self-inflicted ruling limiting any construction in the zone to a height not over 50'.

End of the land. Then FHA and VA issued their 20,000' ruling. The decision was made almost jointly by the agencies. It involved close consultation with the Navy and with the Washington offices of VA and FHA. Both agencies allow their district offices a certain amount of autonomy on this subject for the obvious reason that Washington headquarters cannot know every detail of local conditions that bear on a specific case.

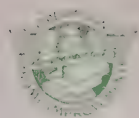
The San Diego decision was a big one because the agencies' line of demarcation did not follow the airbase's flight patterns. "We are not trying to define the Navy's flight patterns, either proposed or present, with this new boundary," said Walter Forward Jr., FHA district director in San Diego. "Instead, we had to decide just how close we could reasonably come with residential development, considering both the noise and the danger pattern, and still maintain future marketability of the homes."

Although most of the land marked off by the FHA-VA line was vacant, reaction from realtors and builders was strong. They had earmarked the land for big development. Builder Louis Burgener noted that the decision affected 8 sq. mi. zoned for home building and another 3 sq. mi. not yet so zoned, but suitable for it. An 87-home tract planned by American Housing Guild fell within the ban. Another 400 homes had been committed for VA guarantee—and the agency allowed financing to go through on these. At least 200 homes in north Clairemont are enclosed by the boundary, but of course will remain there.

Debate still runs high on whether land owners can collect from the Navy for damages. City Councilman Clair Burgener (Louis' brother) suggested the Navy buy the "blighted" land around the air station. "The decision [by FHA and VA] had to be made," he said, "but definite damage has been done and property owners have every reason to expect compensation from the Navy."

Consternation in Texas. Realtors and home builders in San Antonio got a sudden taste of what the jet age might mean when they were exposed to a story in the San Antonio *Light* outlining the high-decibel areas that would be created by jet flight patterns from the municipal airport. The story appeared after Walter C. Gunstream, the city's aviation director, showed a reporter a map that he (Gunstream) had prepared from figures of the American Society of Planning Officials. The map showed six cigar-shaped sound areas, rated in 85- and 100-decibel readings, and it was obvious that much of the city's better residential area would be seriously affected.

Local home builders arranged a quick meeting with reporters and Gunstream that ended in not much more than a general testimony that everybody was sorry that



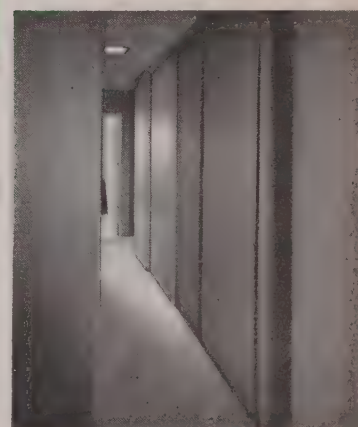
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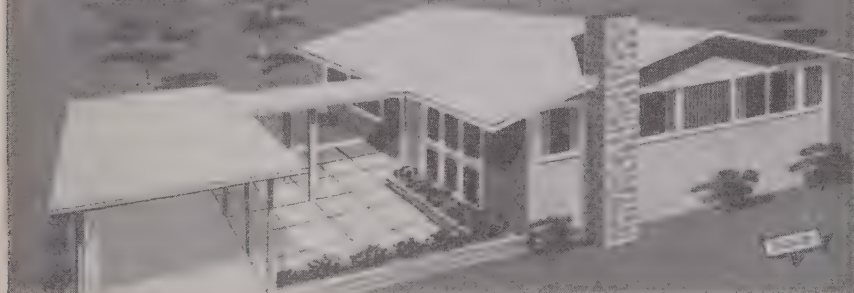
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extend one-half mile from the end of the runway and be 1,000' wide, not counting the width of the runway; with a runway of less than 4,000', the width is the same, but the length is limited to one-half the length of the runway. VA also defines "approach zones," extending another mile from the end of the "runway zone," as areas which demand "special consideration of depreciation factors."

These are basic guideposts. Whether or not to guarantee or insure a mortgage is still up to the local office. The VA office in St. Louis, for example ("The problem is serious and it is getting worse," says a spokesman there), has drawn up a formula for an area stretching 1½ mi. from the perimeter of the airport. VA will not appraise any new property within the first half mile at all; on the few existing properties it might have to consider, the office cuts the appraisal 20%. In the next 2,000' after the first half mile, the appraisal is cut 10%; in the next 2,000', the penalty is 7½% and for the next 1,280', it is 5%.

Are home sales declining near the St. Louis airport? One builder told HOUSE & HOME his own sales there were holding up well. But a prominent realtor figures that in the past five years the price of houses has declined 20%. Now he is "not eager to get listings near the airport." Says the

**Jet crash in Alaska hits
houses 1 mi. from airstrip**

Even houses at right angles to a runway can be unsafe if a jet goes out of control. The homes set afire recently by a crashing jet at Eielson Air Force Base near Fairbanks, Alaska—at least 11 persons were killed—were a full mile from the center of the airstrip and at right angles to the runway, a position that the Air Force planners thought was safest for on-base construction. The dwellings were 12-unit apartment buildings built with Air Force appropriations.

VA official: "You will always get some people who will buy in the immediate vicinity of the airport because it is in an industrial area and they want their homes near their work. But the greater percentage of prospective property owners won't buy there. That is the reason the sales volume is down."

Cutoff for builders. In St. Louis things were just beginning to simmer. In San Diego they were boiling. VA and FHA had refused to guarantee or insure homes within 20,000' of the Miramar Naval Air Station (see map top of p. 64).

The base is situated 15 miles north of the center of San Diego. Much of the mesa on which it stands is suitable for homes and there has been considerable building along its fringes. The base was no great strain on inhabitants of the fringe subdivisions or on builders until it became a full-fledged base (not just auxiliary) in 1952. By mid-1953 the Navy was warning city officials not to allow any home building near the base because of expansion plans. Meantime, the city was at work on

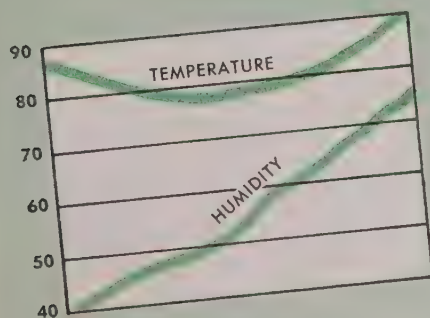
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CENTRAL AIR CONDITIONERS

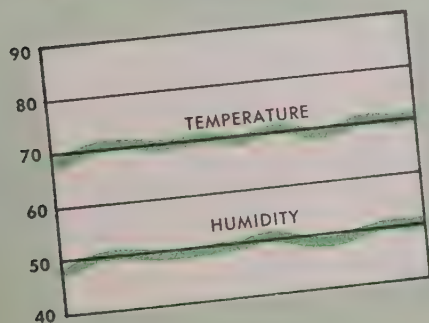
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Here are the results of tests conducted in St. Louis by Dr. E. M. Brooks, Professor of Geophysics and Geophysical Engineering. They prove without a doubt that Vornado does an effective job of cooling regardless of outside conditions. Notice how inside temperatures remained at an even 70 degrees and how humidity never exceeded 50%. These tests were conducted under normal living conditions . . . families with children . . . doors being opened and closed.

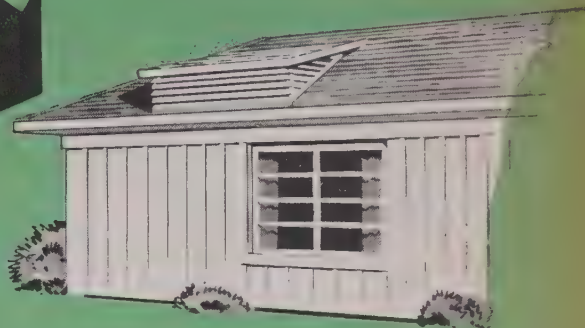


Outside temperatures reached as high as 92 degrees with humidity reaching the 75% point during test period.

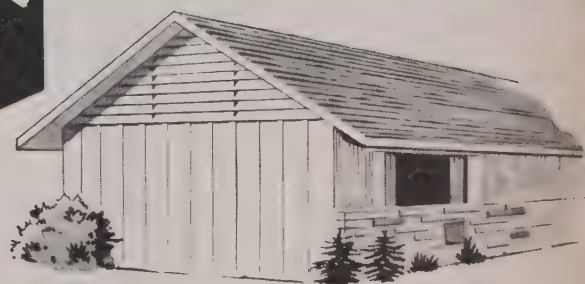


Here's the chart showing Vornado's performance while outside conditions shown above existed. Notice how the temperature remained at an even 70 degrees and humidity never exceeded 50%. Children were running in and out during this extensive test too.

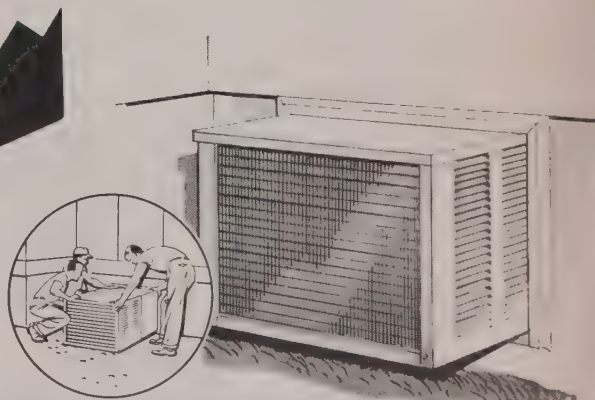
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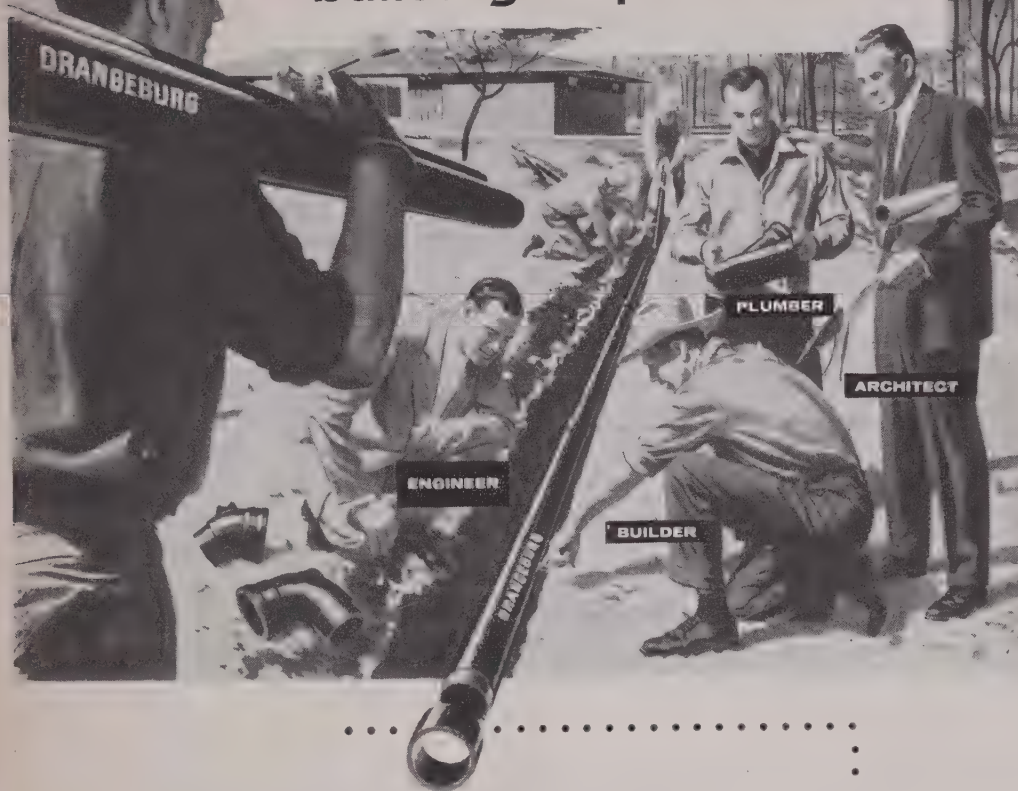
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the news stirred up so much excitement. "Right now we are going to sit tight and not take an alarmist view," said Home Builder President Edgar von Scheele. Gunstream also remained calm. He pointed out that various groups are at work on ways to make jets less rackety. He guessed that by the time they come into commercial use (maybe by late 1959) they would be no more than 15-20% noisier than the four-engine piston types now in use.

Research to come. Well-documented surveys of just what effect airports have had on property values are scarce. Such surveys in the past have produced exactly opposite results, i.e., that in some areas appreciable depreciation has come about, in others, none. The initial effect of the use of jets has been not so much to devalue properties as to render certain areas completely valueless from the standpoint of insurance or guarantee from the government housing agencies. No doubt official rulings from FHA and VA on how they are going to appraise properties close to the jet fields will set the pattern for all appraisals. Their reports are in the works. Other signs of the times:

► Newark Airport—surrounded by families complaining about the noise of low-flying planes—will start work on a new runway this month designed to reduce takeoffs and landings over some of the residential area.

► The Port of New York Authority, which operates Idlewild Airport, refused to allow a De Havilland four-jet Comet III airliner, en route to Australia, to land at the field. The Authority has exercised a ban against jets since 1951 because of the "uncontrolled noise level . . . in their present stage of development."

► The research committee of the Society of Residential Appraisers is at work on a report of the jet's effect on property values, to be undertaken by Adrian McDonald of Hartford, Conn., Monte Carroll of Denver and Alfred L. Haig of Philadelphia.

Public housers keep Red oath despite court ruling

Public housing tenants in Wisconsin are no longer required to sign loyalty oaths.

The US Supreme Court refused to review a state court decision there declaring the so-called Gwinn amendment unconstitutional on the basis that it is a deprivation of the rights of free speech and assembly.

Because the Supreme Court action is not a ruling—does not, in fact, necessarily imply agreement with the state court's stand—the legality of the antisubversive amendment in other states was not technically changed. (Proceedings have started in at least five other states protesting the eviction of public housing tenants because of past or present affiliation with organizations listed by the Attorney General as subversive.)

Lawrence Davern, PHA's assistant general counsel, said the law would continue to be enforced in other states "until courts of jurisdiction void it or Congress repeals it." He added that PHA would welcome a Supreme Court opinion on the law, which he called a "headache."

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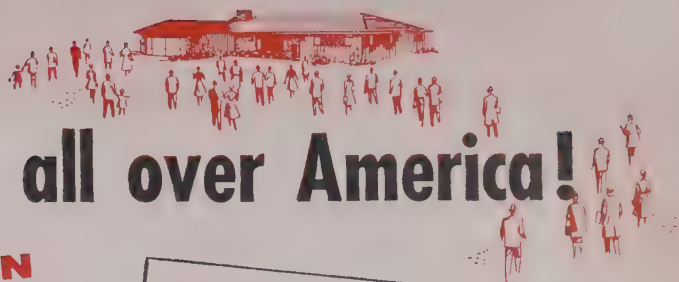
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Middle-income housing: the new battleground

- ▶ **A cry rises for more aid to house \$4,000-\$7,000-a-year families. Democrats lay plans to make an issue of it in Congress, in presidential race**
- ▶ **But rentals for \$20 a room cannot be built, say experts, except through cooperatives. Down payments for these are often higher than for single-family houses**

"In my opinion rental housing has become obsolete. The American people can no longer afford to buy service. And service is a part of apartment house life."

One of the nation's most widely respected housing authorities—Real Estate Analyst James C. Downs Jr.—gave that considered opinion last month before a hearing of the Rains committee of the US House of Representatives in Chicago.

Downs' thesis is that the cost of elevator operators, maintenance by landlords and janitor service has driven the cost of apartment living sharply above the cost of single-family home occupancy. "We do not conclude that apartment buildings will disappear from the urban horizon," Downs has written, "but it is obvious to even the casual student that they will not play a dominant role in the housing of urban families."

No incentive. Most people know by now that the conditions surrounding construction of anything but luxury rentals are prohibitive. Downs' theory of service charges is only one cause of the decline of apartment building for the middle-income renter. Others: 1) rent control where it still exists, 2) inflated land values in close-in locations suited to apartment construction, and 3) legislation. The drop in number of FHA commitments for rental units is notable evidence of what the cost certification and limited-dividend clauses in the Housing Act of 1954 did to rental housing. They virtually eliminated FHA as a factor in financing it.

Put up or shut up. With venture capital swerving away from apartment construction, the city dweller in the so-called "middle third" income group—\$4,000 to \$7,000 a year—is confronted with two choices: he can hold out as best he can in the space he now occupies or he can move to suburbia with his wife and children and buy a tract house.

Indeed some experts see it as not much of a choice—considering the drift of cities to blight and the complications arising from the expansion of racial ghettos. A *House & Home* editor asked Chicago's Downs, after his appearance before the Rains committee, whether the single-family home market could meet the shelter need of middle-income people. Replied Downs: "It will have to, because that's all they're going to get under present financing."

Middle-income lobby. Despite—or perhaps because of—this outlook, recent weeks have brought a barrage of pleas for new aids to get "middle-income" housing built. Most pleaders shy away from a forthright declaration that they mean in-town rental units. But realism compels the inference they do; in many cities where the "middle-income" cry is loudest, there seem to be plenty of cheaper units for rent on the outskirts of town.

Nationally, the well-spring of such expressions has been the CIO-Leon Keyserling-National Housing Conference axis. NHC, for example, proposed recently that a "new federal mortgage bank" be permitted to lend \$3 billion a year to cooperatives, nonprofit corporations and individuals who would put up housing "within reach of families of moderate income that are totally neglected in today's market." NHC would have the government grant 95%, 40-year loans at a 3% interest to achieve its end.

In Miami, Presidential Aspirant Adlai Stevenson, in a talk on housing policy, plumped for "a system of practical governmental incentives that will bring decent private housing within the reach of the middle income group."

Sen. John J. Sparkman, influential chairman of the Senate housing subcommittee, told *House & Home* last month: "We've got to do more to reach the low middle-income families." Probably, thought Sparkman, Congress would have to make direct FNMA support available to produce units renting from \$55 to \$60 a month, sale housing from \$7,500 to \$10,000.

Such a course (which will horrify exponents of a free-market in money) is only the practical outgrowth of the philosophy expressed by Keyserling, who was President Truman's chief economic adviser in 1950-53. Keyserling urges that housing output be tailored to the "social need" and not to existing resources—financial or material. Implicitly, federal planners do the tailoring—and inflation is the result.

Whatever the lenders and builders think, it is clear that middle-income housing will become a new battleground in the new Congress. There will be criticism of both the industry and FHA for aiming too high.

Case of New York. Logically, the loudest voices for middle-income aids have been raised in New York—a city squeezed, as far as its housing problems go, by a low-

income population (some say a third of its families earn less than \$4,000 a year), inflated land and building costs and—at least historically—an obstructive attitude from municipal officials. New York's housing plight is important to the whole nation primarily because the city swings so much political weight. Its actual housing problems—mostly stemming from sheer size and years of neglect—are in another world from those of the rest of the country. Items:

▶ Paul Tishman, who has built everything from luxury apartments to public housing projects, insists it is feasible now to put up middle-income units renting for about \$27.50 per room per month rather than the \$45 or \$50 usually asked. His plan, Tishman has conceded in recent talks, requires "putting together every stratagem of financing in the book." One is New York State's new Mitchell-Lama Act, which has the possible disadvantage—soft-pedaled by its promoters of compulsory open occupancy. The act offers financing at city borrowing rates. The city can lend up to 90% of construction cost. And there is a 50% realty tax abatement. Tishman also counts on federal Title I redevelopment write-downs to get land cheaper. He has been spending much time lately urging banks or businessmen to form a Housing Foundation with \$100 million capital to begin such building—lest New York start on a precipitous decline. Warns Tishman: "It will not become, as some

continued on p. 84

IS THE ISSUE PHONY?

Are supporters of more aids for middle-income housing disguising a big-city problem as a national problem?

Many a realty experts contends that except in the biggest metropolises like New York and Chicago and perhaps one or two more, FHA-backed sale housing on cheap suburban land is already providing a sensible answer to the needs of middle-income families. In the biggest cities, close-in land is too overvalued to permit construction of middle-income housing, either for sale or rent, without a subsidy. Elsewhere, increasing rental vacancies (Dallas has reached 12%, for instance) testify to the nonexistence of a housing problem, middle income or otherwise.

Basically, argue some sources, the middle-income issue is simply an extension of the public housing principle that the government owes a house to everybody who can't afford to buy one.

The big danger to the private home building industry, according to this theory, is that aid for middle-income housing leads toward one of two situations:

1. Government subsidy on an increasing scale for higher and higher priced sale housing—which would cut into the private housing market.

2. Subsidies for rental housing in higher and higher brackets—which would upset and perhaps eventually glut the market for existing rental units (not slums) with disastrous effects on the new-house market, too.

BRIXMENT

Better Mortar for Blocks



BETTER PLASTICITY

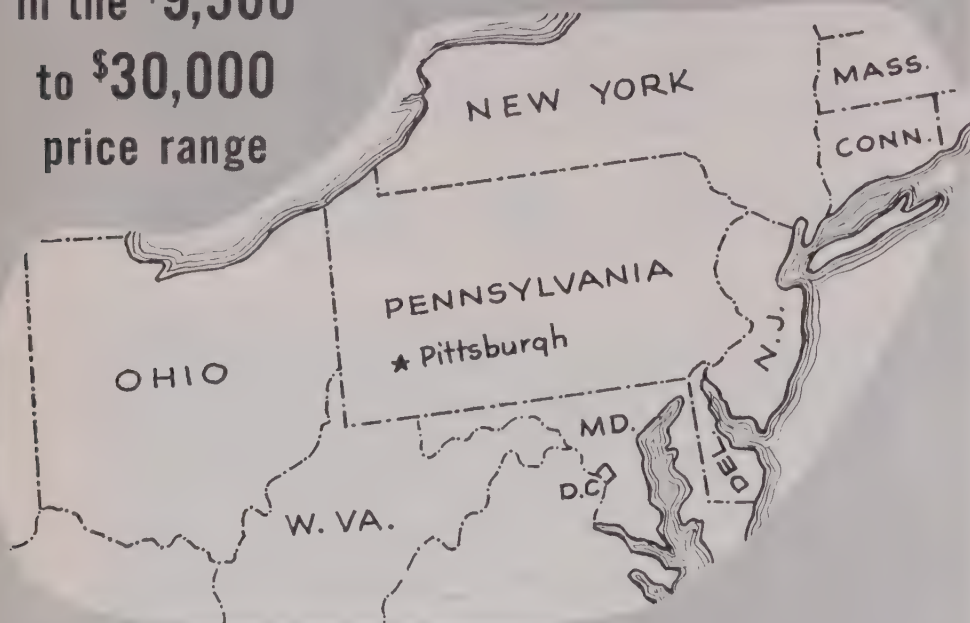
To build the best possible concrete-block walls, the bricklayer must use plastic mortar. The mortar must be plastic enough to stick to the long head joint. It must not drop off the edges of the block when the block is swung up, and lowered into place. It must remain plastic long enough to enable the bricklayer to tap the block down to the line, easily and accurately.

Brixment mortar provides this necessary plasticity. Moreover, it stays soft and plastic long enough to let the bricklayer level, plumb and straighten the unit and adjust it to its final position in the wall before the mortar stiffens.

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price range



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suggest, a city of the very rich and of the very poor, for when there is none except the rich to maintain a city with a \$2 billion budget for only themselves and the poor, I don't think the rich will remain in New York."

► Ira S. Robbins, executive vice president of the Citizens' Housing and Planning Council, advocates government aid to private builders for middle-income housing as one of five ways to "stop the spread of slums and the flight to the suburbs."

► Philip J. Cruise, chairman of the New York Housing Authority: "What we need more than anything else at this point is an increased flow of private capital into housing and redevelopment. The source can and should be New York's business and industry."

► Builder David Rose: "Let the city acquire other large areas as it has done under Title I, then rezone these areas, set whatever practical limitations seem desirable, stimulate builder interest with some tax benefits and sell the land in the open market for immediate building."

Big sprawling problem. Why does New York rate classification as a specialized case of resistance toward middle-income housing exhibited by its officials in past years? One of the biggest real estate owners in the city, Aaron Rabinowitz, board chairman of the Fred F. French Investing Co., who served on the State Housing Board from 1926 to 1943, recounted the reasons in a recent talk. Said he:

"With the election of a new administration under Mayor LaGuardia [in 1934], there was launched an attack on the entire program of limited dividend housing in the city. Mayor LaGuardia, without reason, without cause, and without notice, summarily withdrew the partial tax exemption from all projects, except one. This would have destroyed the limited dividend companies organized under state law by taking away the partial tax exemption already granted and by which the statutory rents were possible.

"The exception was the Amalgamated [the Amalgamated Clothing Workers]—they were a union; they were organized. . . . Had LaGuardia been successful, all of the projects already built would have been forced into liquidation. Each project had to fight for its own existence in the courts—at great expense. Although all were finally successful, this political attack completely destroyed the confidence of investors in any further undertakings under public control. It marked the end of limited dividend housing under the Housing Law. . . .

"Do you remember the abuse that Metropolitan Life took a few years ago from the city officials? Bob Moses had persuaded them to build the Stuyvesant Town buildings under a contract that the rent should be sufficient to pay 4% plus 2% amortization. Yet the Board of Estimate passed laws fixing the rents where only 2% interest plus 2% amortization was possible. They had to go to the courts to enforce that provision in the contract. Is it likely that after such abuse the Metropolitan, or any other insurance company, would build another project?"

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door
at the
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Show
Booth 531*

A door and frame packaged
unit complete with the door
hung and locked and the
frame trimmed both sides,
ready to install in any rough
opening in
20 Minutes

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Birmingham, Alabama
READY HUNG DOOR MFG. CORP.
San Antonio, Texas
SOUTHWEST SASH & DOOR CO.
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CALIFORNIA
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Burbank, California
READY HUNG DOOR MFG. CO.
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LUMBER DEALERS, INC.
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BAILEY-WHALEN CO.
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Grand Rapids, Michigan
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St. Louis, Missouri
JORDAN MILLWORK CORP.
Sioux Falls, South Dakota
LUMBER DEALERS, INC.
Denver, Colorado

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ACME SASH & DOOR CO.
Cincinnati, Ohio

LOUISIANA
FRANK STEVENS SASH & DOOR CO.
Waco, Texas
SOUTHWEST SASH & DOOR CO.
Houston, Texas

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Portland, Maine

MARYLAND
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Birmingham, Alabama

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LUMBER DEALERS, INC.
Denver, Colorado

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READY HUNG DOOR MFG. CO.
Oakland, California

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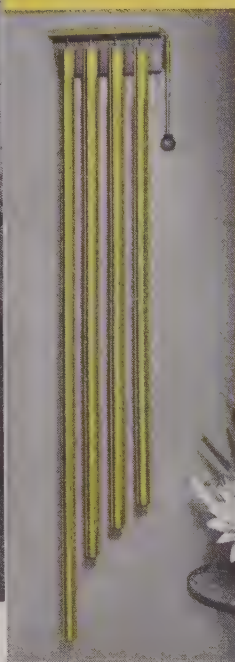
Add sales appeal and glamour with Rittenhouse CHIMES

RECOGNIZED for QUALITY and STYLE LEADERSHIP



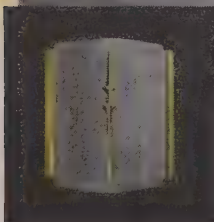
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Automatically sounds 8-note entrance signal. Doubles as dinner chime. Sound bars in polished brass. Base of natural walnut.



CRESTWOOD

Styled for contemporary homes. Cover has rich walnut or modern lined oak finish against brushed brass tubes.



PRECEDENT

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No other sales feature can be added to your new homes as economically as a door chime. Your prospective buyers recognize the quality and style leadership of Rittenhouse Door Chimes.

Nationally famous stylists have incorporated grace and charm in Rittenhouse Chimes for homes of any style or size. Select from 19 surface or flush-mounted models including new chime systems for larger homes. New non-electric models for small homes and apartments.

Write for illustrated catalog describing complete 1956 line.



Rittenhouse DOOR CHIMES

THE RITTENHOUSE CO., INC., 56 Allen St., Honeoye Falls, N.Y.

Cooperatives vs. homes. The middle-income family in New York has been aided to some degree by the construction of co-operatives at rents of about \$17 to \$22 a room. The United Housing Foundation, for example, organized in 1951 to help develop such projects, has four under way now for a total of 2,612 units. The biggest chunk—1,668 units—will be finished off in February; construction has started on another 290 and will begin on another 664 early in the year. The foundation's members are cooperative, civic and union organizations working jointly to put up apartment buildings with funds collected as down payments from prospective residents plus mortgages arranged by UHF.

It is significant that the tenant owner's down payment for a cooperative apartment is at least as large as, and in most cases larger than, the down payment on an FHA home. Down payments for middle-income cooperatives are between \$200 and \$600 a room. A family can buy a \$12,000 FHA-insured house with a down payment of \$1,200.

As Chicago's Jim Downs notes, FHA's viewpoint seems to be to make it that way. Result: "If you have one channel of credit open and one closed, the builders are going to use the open one."

The big boost. FHA's endorsement of the single-family home as the best shelter buy in America—the endorsement is implicit in the financing terms, if not in statement of official policy—serves at once to promote home ownership and to cut into demand for rentals. Some of the fashioners of the barrage for bigger and better middle-income rental properties seem to overlook this fact. Proponents of middle-income housing would do as well to wage battle for revision of FHA's rental housing regulations as they would to lecture on the necessity of "somebody" putting up some medium-rent apartments.

The most factual argument for nomination of the single-family home as the best solution to the middle-income shelter problem is that it costs less—for the space obtained—to pay for a house than it does to rent an apartment. When Downs became president of the Chicago Dwellings Assn. in 1948, he recalls, "We acquired a site suitable for apartments," and undertook computations of achievable rentals. The results were astonishing. We found that the rents on apartments which we could build would be substantially higher than the monthly payments with which our prospective tenants could buy and pay for houses offering the same accommodations." Downs' estimate of comparative monthly costs to occupants of a \$12,000 gross cost unit—still applicable on a proportionate basis today:

	APT. TENANT	HOME OWNER
FACTOR OF COST		
Capital charges	\$60.80	\$60.15
Property taxes	30.00	25.00
Fire insurance	1.25	1.25
Utility charges	15.00	15.00
Management	6.00	
Operating services	6.00	
Repairs, maintenance and replacement	14.50	4.50
Entrepreneurial profit....	10.45	
Total rent	145.00	105.95

Real Bathroom Service...

**gleaming beauty
...solid utility**



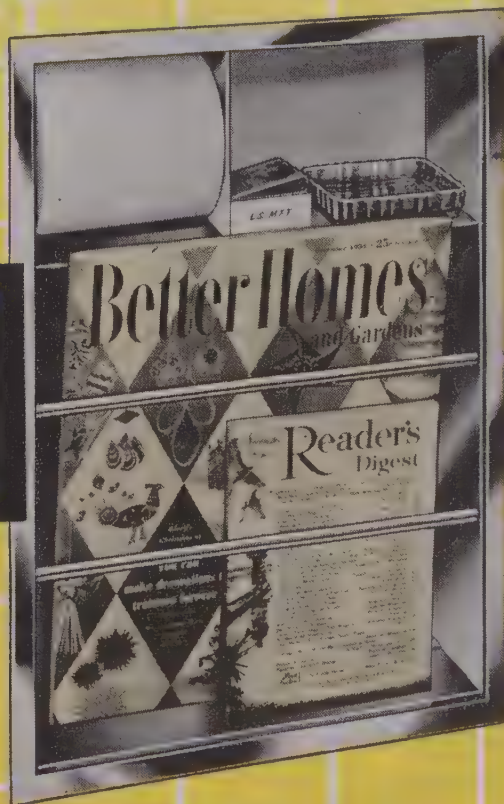
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**Relaxation
Unit**
by



*This modern recessed unit provides
ample space for...*

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Relaxation Unit is designed for
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and bars that hold magazines match
the chrome trim of the bathroom
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is a beautiful metallic hammertone
texture. Easily installed — the
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real bathROOM Service!



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WALLS- *Good or Bad?*

Pure gypsum with no added aggregates, such as used in wallboards, is rated the finest wall finish material. It's lifetime is unlimited and it contains no detrimental expansion or contraction properties to cause future cracks and blemishes in the finished wall. With this type of material the cause of bad walls must rightly be placed on bad construction practice.

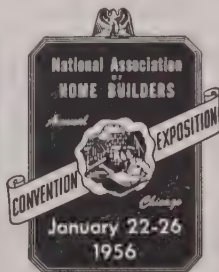
Wood framing materials continue to shrink for several years after being installed. Therefore, immediate caution with wall finish application is essential to eliminate the hazards caused by this extended shrinkage.

With proper application, wallboards are positively attached to the inner frame members except at the immediate corner areas. At these corners the panels require only a minimum attachment which holds the wallboard ends temporarily in place until proper reinforcements are installed. The major flat wall finish area will follow the future inner frame shrinkage and cause no damage or harmful change in the finished wall contour. However, for the finished corners to remain sound, the corner reinforcements must be specially designed to be attached directly to the wall surface itself. They must also supply ample strength to the finished corner for it to divorce itself from the inner frame as it becomes necessary.

Outer corners confront an unavoidable bracing action where two walls surfaces meet together. This forestalls any inward corner movement without contortion penalty. Inward movement of inner corners will cause wall separation cracks. Under no circumstance should corner reinforcements be securely attached to receding inner frame members.

THIS IS YOUR FORMULA FOR PERFECT DRYWALL

Get all BEADeX and Jambex application facts at NAHB Show—Booth 811
Chicago Coliseum January 22-26



JAMBEX (new method of application) provides sufficient flexibility to keep wall finish permanently intact



Jamb trims should also prevent wall surface cracks instead of producing them. As stated, the major flat wall surface areas are positively attached to the inner frame structure. To overcome a most serious hazard caused by frame member shrinkage, jamb trims need leeway to permit movement with the receding frame members. This applies not only to trim for windows which contend with only one wall, but doubly so to door jamb trims where two opposite wall surfaces are being forcefully drawn closer to each other. Jamb trims must retain wall surface contact permanently or the inevitable outcome will be unsightly cracks being expelled to the wall surface.

A sawed kerf in the jamb stock, for use with a properly designed trim, provides this necessary flexibility which eliminates the otherwise serious hazard caused by the continued frame structure shrinkage. The kerf also adds finest quality by providing the means for straight true wall surfaces around doors and windows with wallboard finish.

Beadex (outer corners) BeadeX (inner corners) and Jambex trim are designed expressly to permit sound construction with wallboard finish. These patented products are fully guaranteed by

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Light Construction
3D
BE
Architectural
12A
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EVENTS

Small Homes Council of University of Illinois, 11th annual Short Course in Residential Construction, Jan. 18-19, Urbana, Ill.

National Assn. of Home Builders, annual convention and exposition, Jan. 22-26, Chicago Coliseum and Conrad Hilton and Sherman Hotels, Chicago.

American Society of Heating and Air-Conditioning Engineers, Inc., annual meeting, Jan. 23-25, Sheraton-Gibson Hotel, Cincinnati.

Mortgage Bankers Assn., 11th annual Senior Executives Conference, Jan. 24-26, New York University downtown campus, New York.

American Bankers Assn., regional savings and mortgage conference, Jan. 30-31, Muehlebach Hotel, Kansas City, Mo.

American Institute of Electrical Engineers, winter general meeting, Jan. 30-Feb. 3, Hotel Statler, New York.

Winter Furniture Market, Los Angeles Furniture Mart, Jan. 30-Feb. 3.

Mason Contractors Assn. of America, convention and show, Feb. 5-8, Kentucky Hotel, Louisville, Ky.

NERSICA, 14th annual convention and exposition, Feb. 11-13, Ambassador and Ritz-Carlton Hotels, Atlantic City, N.J.

Washington Home Show and Do-It-Yourself Exposition, Feb. 18-26, Washington, D.C.

National Adequate Wiring Conference, Feb. 23-24, LaSalle Hotel, Chicago.

Mortgage Bankers Assn., Midwestern mortgage conference, Feb. 23-24, Conrad Hilton Hotel, Chicago.

American Society for Testing Materials, committee week, Feb. 27-Mar. 2, Hotel Statler, Buffalo, N.Y.

National Electrical Manufacturers Assn., mid-winter meeting, Mar. 12-16, Edgewater Beach Hotel, Chicago.

National Home Show, sponsored by the Toronto Metropolitan Home Builders Assn., Mar. 30-Apr. 7, Coliseum, Exhibition Park, Toronto, Canada.

Mortgage Bankers Assn., Southeastern mortgage clinic, Apr. 5-6, Hotel John Marshall, Richmond, Va.

National Housing Conference, annual meeting, Apr. 9-10, Statler Hotel, Washington, D. C.

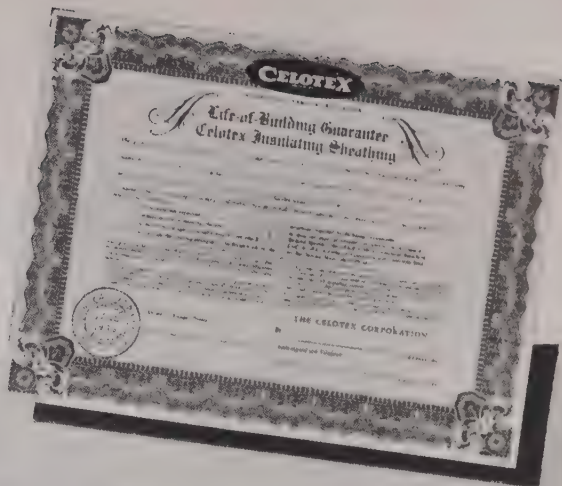
Mortgage Bankers Assn., Southern mortgage conference, Apr. 9-10, Dinkler-Plaza Hotel, Atlanta.

Gas Appliance Manufacturers Assn., annual meeting, Apr. 19-21, The Greenbrier, White Sulphur Springs, West Va.

Mortgage Bankers Assn., Eastern mortgage conference, Apr. 30-May 1, Commodore Hotel, New York.

National Assn. of Home Builders, 3d annual model home contest, open to students in grades 7 through 12. Entries must be submitted through local NAHB chapters by Aug. 31.

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Build more homes with your present capital investment . . . fewer manhours . . . material stockpiles eliminated. The Allen Homes system does all this for you *and more!* Whether you build small homes—large homes—or both: it will pay you to investigate ALLEN HOMES. You can face the future with confidence that your homes will meet any competition . . . for ALLEN HOMES have built-in sales appeal that will attract home buyers in any market!

Get the facts! Let us show you the kind of results other builders are getting with the ALLEN HOMES package . . . you should take advantage of the same opportunities!

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LETTERS

TRADING TO THE FORE

Sirs:

We particularly enjoyed the Eichler homes story in October and the study on trading in November. This trading business has recently pushed itself to the forefront with us. We were glad to have some timely advice.

DAVID D. NELSON
Nelson-Moore Realty Co.
Decatur, Ga.

MISERY'S COMPANY

Sirs:

We are attempting to provide what your November issue aptly describes as "one-stop home improvement" service. But we find our path beset with frequent obstacles. Lack of adequate salesmen, difficulty of establishing personal contact with customers, community apathy are just a few. Misery being reputedly gregarious, we took some comfort in your article's inference that others had similar problems.

MORGAN I. DOYNE, P. E.
Chief Engineer
L. P. Roth Construction Co.
St. Louis

MORE TO SAY

Sirs:

After reading your extensive coverage of the home improvement program, I can't help but believe there is more to say on the subject. An overcrowded, poorly planned area cannot be made a satisfactory community simply by improving each house. It can only be improved through replanning, clearance and redevelopment.

Painting and home maintenance should be pushed, but the more the cost of the improvement and the less the value of the property to be improved, the more uneconomical the result.

For example, a home owner who is paying on a shabby \$5,000 house, when confronted with a \$7,700 improvement (as in one of your cases), must be able to support a \$12,700 investment. How many owners can? Maybe we could find a buyer for this \$12,700 house, but the original owner would be priced out of his home.

Certainly a fancy front on a rotten core will not solve our housing problem.

JEROME B. GILBERT
Fort Smith, Ark.

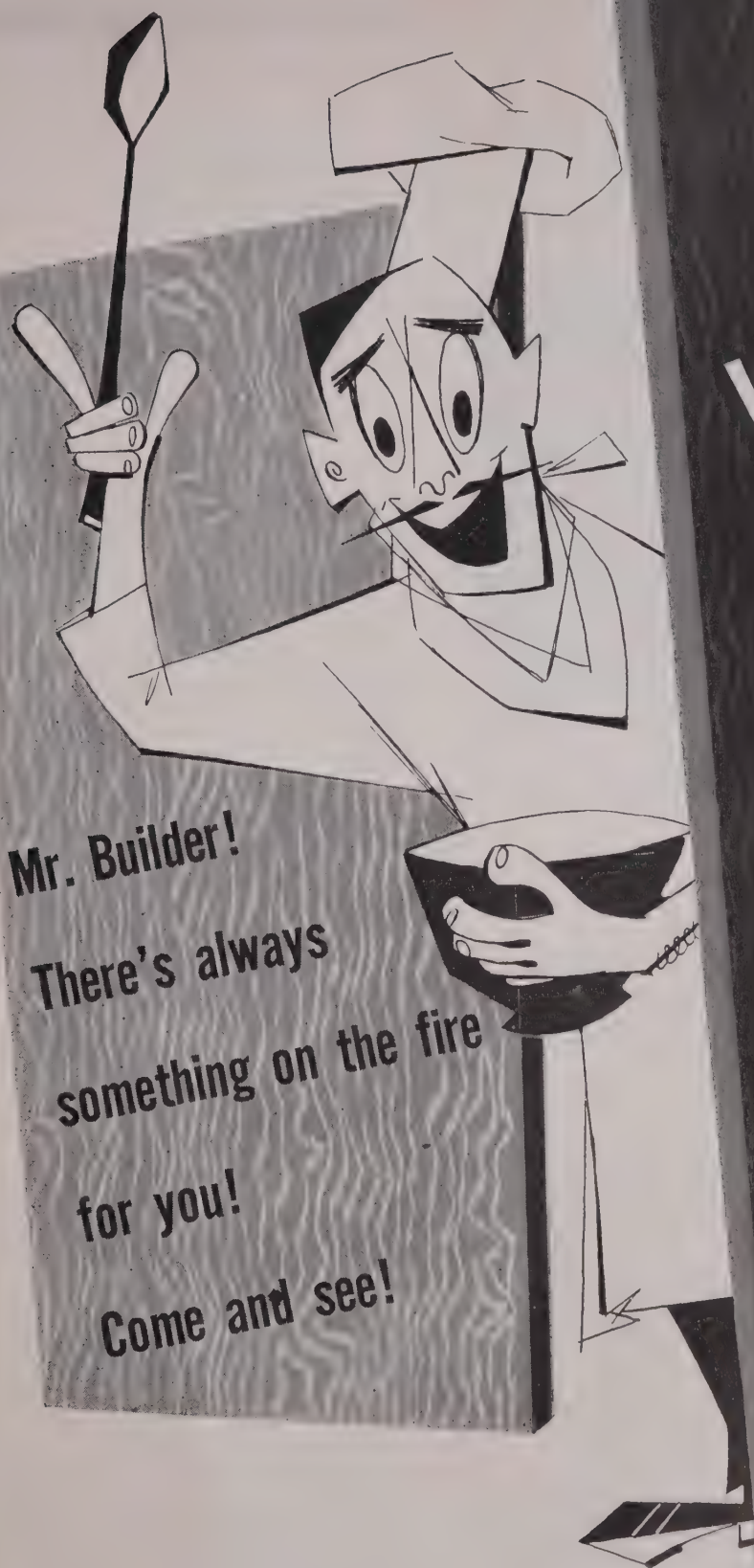
BACK OF THE YARDS

Sirs:

The November issue is an excellent and stimulating job. One correction: The Back of the Yards Council does not receive grants from the City of Chicago but from the Community Fund.

D. E. MACKELMANN
Deputy Coordinator
Housing & Redevelopment
City of Chicago

continued on p. 104



Mr. Builder!
There's always
something on the fire
for you!
Come and see!

What's cookin' at Youngstown Kitchens?

See what at BOOTH 74-78
Conrad Hilton Hotel, Chicago
January 22-26.



See our first-floor display at the National
Housing Center, Washington, D. C.



STEEL
Youngstown Kitchens

Sold in the United States, Canada, and most parts of the world
Mullins Manufacturing Corporation • Warren, Ohio
World's Largest Makers of Steel Kitchens

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ALUMINUM SLIDING GLASS DOORS



These are but a few of
GLAMOUR'S features...

- GLAMOUR Sliding Glass Doors are available K.D. in multiples of 3 ft. (6-9-12, etc.) or 4 ft. (8-12-16, etc.). 6'9 1/4" overall rough opening height. No extra mullions needed in any of our multiple door units.
- 6063-T5 Satin finish, thick aluminum — heat treated, rustproof — protected against moisture, abrasion and staining by our own "Glamourited" process.
- Full width jambs. Square tube door frame sections for full strength and rigidity. Mitred corners assembled with heavy wrought aluminum angles.
- Bottom mounted adjustable ball-bearing rollers.
- Stainless steel roller track for life-time wear.
- Fool-proof cadmium plated adjustable latch.
- Unique, stay-put wool pile weather-stripping, adjustable to seal at all times regardless of the level of the door or sill. Twin-sealed at locking stile and jamb. Weather-stripping replaceable without dismantling door.
- Glass set in vinyl channels—ELIMINATES PUTTY! Glass is installed from interior with easily removable aluminum bead — ideal for multiple story structures.
- For single glazing (3/16", 7/32", 1/4"). Double glazing (1") units available.
- Tap hung extruded aluminum framed screens (optional at extra cost), completely assembled with fly strip.

To really appreciate their
outstanding value...

**PLEASE—Compare them
only with the
most expensive units!**

*Only Glamour
offers custom quality
at standard prices!*

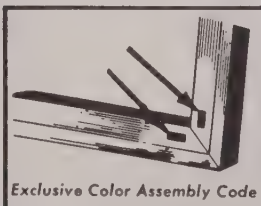
\$154⁹⁵

6 Foot Unit
LIST PRICE

**WITH FREIGHT
PAID TO YOUR SITE —
COAST TO COAST!**



Exclusive Organized packing



Exclusive Color Assembly Code

**AND YOU SAVE ON THE JOB
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continued from p. 102

LETTERS

EYE OPENER

Sirs:

I enjoyed your articles on remodeling old rental units. I own half a dozen and for several years have been trying to do with them just what you show.

I am now completely convinced there is no such thing as a "good old house." A partner in a small construction firm, I know a little about modern construction... houses have never been built truer, straighter, stronger, or of better materials than they are today.

My old houses sit firm and solid on strong uncracked thick stone walls. Yet the walls run up on the vertical as much as 1" of 2" off. Cupboards never fit, door frames never fit, in fact, nothing ever fits. Studding is placed at random. Even in a straight wall it is often crooked. Plyscore, laid over old floors, has to be trimmed crookedly to fit walls that were apparently laid out by eye. Asphalt tile has to be constantly cut to allow for as much as 1/2" of weaving in the walls.

Wiring when old is always dangerous, old plumbing is always in need of replacement. Old heating systems are not good enough to leave in. Often the sewer drains are obsolete.

It takes a lot more than money (which is hard to get here for fix-up), time and a good idea to remodel. Anyone should go into this business with his eyes open.

JACK DOWN
Webberville, Mich.

GOOD AND WELFARE

Sirs:

You are contributing more to the good and welfare of the American home builder than any, or all, nonprofessional magazines combined. I am grateful.

BEN F. CULLER
Palo Alto, Calif.

FAVORITE SUBJECT

Sirs:

My favorite subject nowadays is the great contribution that our trade magazines (with HOUSE & HOME setting the pace as well as the pitch) have made to the improvement of the nation's housing through a reborn home building industry.

RICHARD HAIL BROWN
B-D Development Co.
Birmingham, Ala.

STRICTLY LEGAL

Sirs:

I ask your forgiveness for the many coupons I am dumping in your lap. I finally found some free time in which to catch up on my copies of HOUSE & HOME. I hope it is still "legal" for me to request these brochures.

RICHARD L. MORTON
East Lynn, Mass.

House & Home

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Site plan: Garden City, Pittsburgh
Drawing by Natalie Forsberg

Before the buyers market hits you, too . . .

LET'S LOOK AT

Thomas Hollyman



Squire Haskins

THE DALLAS MARKET

Let's see what it takes to sell new houses

when vacancies near 6%

and 12,000 new families

can pick and choose

from 18,000 new houses

*It would be well worth your while
to take a trip to Dallas
to see for yourself what happens
when 700 home builders plunge head-
long into a buyers' market
for which few if any were prepared*

Booming Dallas is just about home building's strongest market. It is so strong that up to last year everything sold—good, bad or indifferent.

This market was so easy to sell most builders offered almost the same house—a well-built brick affair with good area per dollar and no new-fangled innovations to scare anyone away.

It was so strong that even policemen, firemen, airline pilots and other amateurs took to home building as a side line to pick up some easy money. It was so strong it took little selling—many small builders just left their homes open and waited for buyers to telephone an offer. It was so easy no Dallas builder, big or small, saw any reason to pay commissions to get a realtor's help in selling his houses.

It was so strong few builders felt they had to add new sales appeals to their old models. It was so easy few builders saw any reason to have their houses specially designed by an architect. (Most Dallas builders get their designs from two big plan factories, the Plan Shoppe and Milam & Roper, who have a near monopoly in the FHA and VA offices, offer a choice of 3,000 plans at \$25 for the first four repeats, \$5 a house thereafter.)

It was so easy few Dallas builders cared if their FHA and VA offices were among the most reactionary in the country, hard to sell on anything new.

It was so easy that way back in 1950 NAHB President Tom Coogan warned the Dallas builders to up-date their product before they hit a tougher market. It was so easy that last year . . .

The Dallas builders outdid themselves

They tried to sell new houses 50% faster than even booming Dallas was growing—18,000 new houses in a market that was gaining 12,000 families, more new houses than the builders in any other area except Los Angeles, New York and Chicago built.

They sold all but about 1,000 of them. But that's when Dallas turned overnight into a buyers' market for houses—the biggest and perhaps the toughest buyers' market, with the highest vacancy rate in the country.

So now Dallas is just about the best place to study what happens when the market catches up with the builders and parts the sheep from the goats.

What kind of houses are now too hard to sell?

Which builders are still zooming along, increasing their sales? And why? And how?

When the public was given a chance to choose . . .

Dallas Home Builders Magazine



These old reliables moved slowly, even at 30 years, nothing down

After three months 18 out of 30 of these \$15,000 to \$17,000 houses in north-east Dallas were still standing unsold. One explanation may be location: the same model sold 12 out of 25 in a month in an easier-to-reach tract. Sales would have been slower, the builders concede, had they not added dishwashers and garbage disposers as "extras" at no added charge. It takes more than easy terms to sell houses in Dallas now.

Hence Griffith



But this new model is sold way ahead at \$2,500 cash to veterans

Builders Fox & Jacobs sold a house a working day all fall at \$18,000 to \$20,000. Buyers liked these 1,700 sq. ft. houses.

Because:

1. They are air-conditioned. Dallas is one of the hottest big US cities. Average temperature in August is 96.1°. But very few builders cash in on summer cooling.
2. They are \$20,000 houses in a \$25,000 neighborhood.

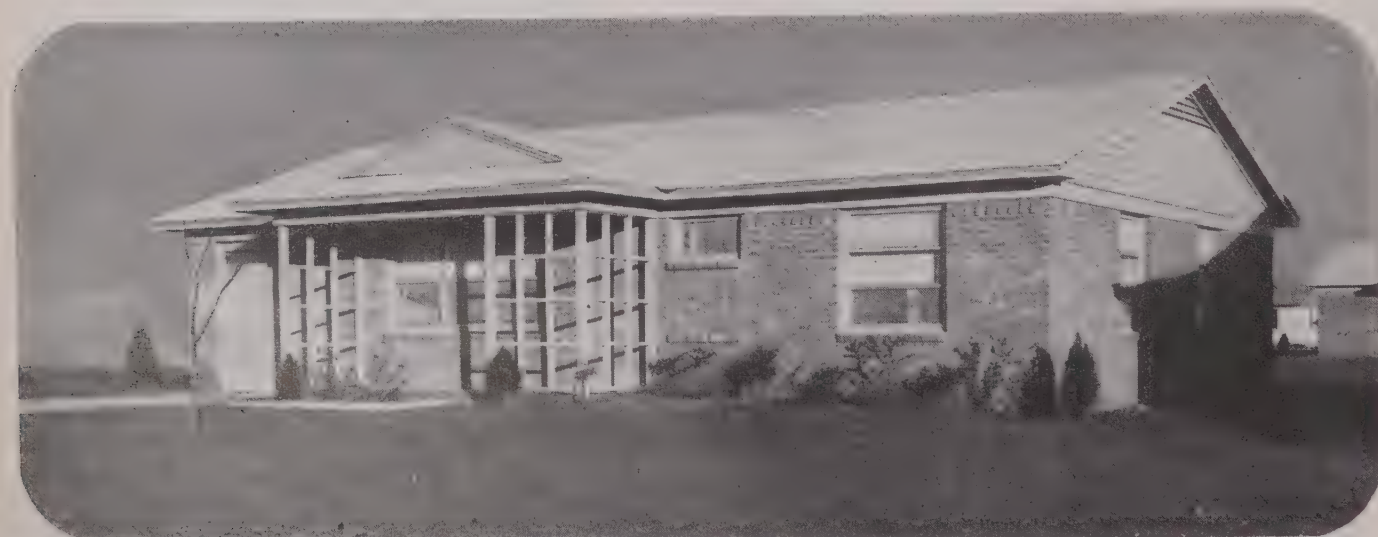


3. They are on big lots (three per acre), many planned on cul-de-sacs to get small front yards and big back yards.
4. They offer clean, simple design.
5. They are a lot of house for the money.
6. They offer better storage. Many have walk-in closets.
7. They are well built, and the builders showed off their good construction in their model house (see picture). The wood floor above the slab was planned to provide a return air plenum for the air conditioning.

Photos: Henc Griffith



These homes were selling much faster last fall . . .



. . . than these houses the same size for less money right across the street

Because buyers liked the sliding glass wall and the little paved patio off the kitchen-family room.

That, at least, is the only explanation Builders Lewis & Lamberth can give why their 1,080 sq. ft. houses are selling faster at \$11,400 than otherwise quite similar 1,050 sq. ft. houses priced \$1,100 cheaper right opposite. The builder across the road seems to agree: his next houses will offer sliding glass walls, too.

One big reason people move to the suburbs is to enjoy some indoor-outdoor living instead of being cooped up inside four walls, but until Leslie Hill brought the Cliff May house to Dallas no major builder there tried to cash in on this obvious sales appeal. Now several builders have had such success with window walls and paved patios that others are rushing to copy.



Plush houses like these are still selling well

There's plenty of money for new houses in Dallas. Builder Hal Anderson puts up long rows of houses like these on speculation, sold 30 in 1955 at \$100,000 to \$175,000 apiece. Recent buyers include some of Dallas' more prosperous builders. Anderson's houses are all pretty much alike except for their different swimming pool shapes. He does most of his own design.

Luxury apartments are also in strong demand while many low rent apartments go begging.



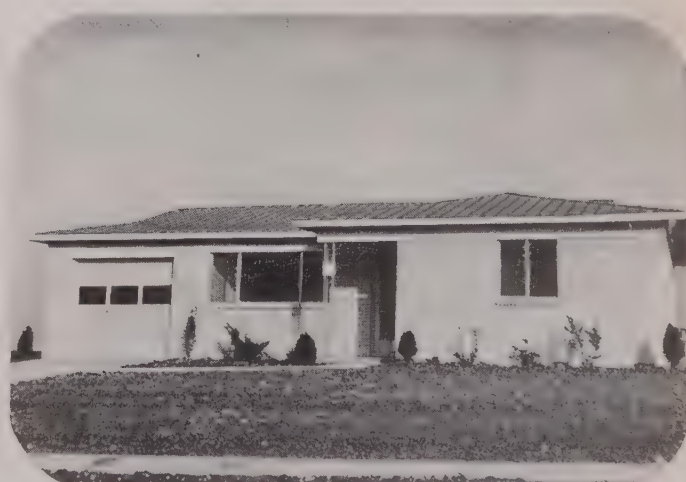
Good salesmanship can still keep houses like this moving

The Melton brothers may not build the best-looking houses in Dallas county—as this example in their newest development shows—but they know how to sell and they work at it. Unlike most Dallas builders, they're out on the job every weekend waiting to hail prospects as they drive by. Result: they are still selling houses as fast as they can build them.

Some of Lawrence Melton's advice on selling is worth repeating. For example:

Don't try to sell an \$11,000 house like this to a man who drives by in a Cadillac.

Don't try to sell an \$11,000 house to a man who drives by in any new car. He'll



be a bad credit risk, for the auto salesman got him first.

Many small builders in Dallas could profit by the Melton's example and work harder at selling. Many of them just leave their houses open and untended, even on weekends. They still expect the prospective buyer to look them up and ask to buy the house if he likes it.



**This biggest builder sold 1,300 houses because
he undersold his small competitors by \$1,000**



This is the best-selling house in Dallas for just one reason: it is the most for the money offered by any builder there, and most-house-for-the-money always sells. Other Dallas builders agree it is priced well below the market.

Builder of this house is Tom Lively's Centex Construction Co., by far the biggest builder in Dallas and one of the two or three biggest in the country. Centex develops its own land, buys materials by the carload, has unbeatable financing resources. It is a cost-cutting mass producer, never building less than 300 units at a crack.

The moral and the lesson is clear: when the chips are down, the big builders can make a profit selling houses a lot cheaper than small builders.

Centex sells 1,100 and 1,200 sq. ft. brick houses on well-landscaped lots at \$11,000 to \$12,000. They include silent wall switches, glass-enclosed bathtubs, garbage disposers, double sinks and vegetable sprays, wiring for television, metal Venetian blinds, 12'-wide garages. Tom Lively sold more houses in Dallas in 1955 than in 1954, but he is not satisfied, plans quite a few changes this year, including sliding glass walls, two-car garages.

Rental properties like this are hard hit



Vacancies hit 50% last summer in 187 two-bedroom rental units like this (above) built by Leslie Hill right after the war. Hill filled them up again by offering them for sale at \$150 down and \$75 a month for 18 years (he had been renting them for \$74). This is equal to about \$8,000 a house, a very profitable deal.

Somebody has to be hurt if Dallas builders are to sell their new houses so much faster than new families are added to the market. It's simple arithmetic that you can't sell 18,000 new houses to 12,000 new families: you have to pull 6,000 families out of existing homes and push the vacancies up.

So far the only people hurt are the owners of rental property. Less than 2% of the 160,000 or so owner-occupied houses are vacant, and used-house prices are still steady. (Sales through the Multiple Listing averaged \$14,519 in 1953; \$13,499 in 1954; \$13,972 in 1955). But rental units are a different story. Some 10,000 are now vacant. Census says vacancies in big rental projects average 12½%, but Dallas bankers say this figure is inflated by heavy vacancies in a big public housing project.

For the heavy rental vacancies there are two reasons:

1. FHA and VA make it cheaper to buy.
2. Only one or two Dallas builders like Leland Lee (see opposite page) are making a direct drive to sell new houses to present home owners.



**This little builder zoomed his sales 600 %
by using trade-ins to tap a big new market**



There are 160,000 home owners in Dallas, many of whom would like to move to a better house if they were not stuck with the old one.

But Leland Lee is the only Dallas builder making a major effort to tap this market of second-time buyers. He does it by trading, and trading has enabled Lee to boost his new-house sales from only 15 a year three years ago to more than 100 a year now. In one week last November Lee sold five houses by taking old homes in trade.

No other Dallas builder consistently uses the trade-in to make it easy for home owners to get their money out of their old houses. No other builder whole-heartedly uses trade-ins to help Dallas home owners get out of their inadequate homes into the big new houses they want.

That's one major reason why Dallas builders have built themselves into a buyers' market. As HOUSE & HOME pointed out last November, "Without trade-ins (builders) will find themselves stuck in the old market, selling (as now) mostly to three groups whose home buying power averages well below the national average—renters, newlyweds and migrants from other states."

Lee does not rely on trades alone, of course, to sell houses. He offers traders good value in his new houses. For \$15,500 they get a lot of well-planned space, including a family room with a built-in \$25 desk, a built-in bathroom clock (with plug-in for coffee maker), a clothes closet next to the half-bath so the owner can later convert it to a full bath, rounded baseboard corners to make sweeping easy.



This four-way trade found four owners wanting to buy a better house.

Photos: Bert Francis

Now the big question is:

Should the home builders cut back 30%?

If so, the kind of house they are building this year will do, for the 12,000 new families would then have to take the 12,000 new houses offered them. And anyhow, people without a home aren't necessarily looking for something new and different. Many just want a place like everyone else, and it is often easier to sell them something familiar than something new, even if the new is better.

If not, the builders need to offer a new and snappier model, for to sell 18,000 houses again this year they must sell 6,000 to Dallas people who already have homes. That means the builders must add strong new sales appeals to the new houses and so make thousands of home owners dissatisfied with their present homes and ready and eager to move to the new ones.

On this street you can see "for sale" signs of half a dozen small builders



Will small builders like these take the rap if home building is cut back?

Almost all Dallas builders think somebody should cut back, but few of them plan to take the cut themselves if they can help it. Most of the full-time operators are making 1956 plans to build and sell as many houses as in 1955. But many believe the small builders (especially the part-time builders) will have trouble getting mortgage money and this will drive them out of the market. (Plenty of big builders are having trouble getting mortgage money, too.)

Up to now, Dallas has been a small builder's paradise, for Dallas has several big land developers opening up new tracts and making it easy for small builders to get sites. As a result, builders of fewer than 10 houses a year account for a bigger proportion of Dallas home building than they do nationally.

Fortunately:

There are plenty of new sales appeals and sales methods waiting for the Dallas builders to use:

Dallas houses have many good points. For example, they use brick veneer all around, instead of using cheaper facing on sides and rear. They show few banana splits, i.e., facades variegated with different materials in two or three vertical stripes. They have good area per dollar. They put all their space and money above ground, mostly on slabs. They use 100 amp entry boxes and 3-wire feeds to permit adequate wiring. They seldom use the 2'-high windows that turn bedrooms into cells in so many other cities.

But Dallas builders who want to sell more houses in a tougher

market have a choice of many selling tools, few have been using:

1. Air conditioning. Dallas is so hot almost everybody wants it. All new houses above \$20,000 have to have it, but only a handful of builders include it in any model under \$18,000. So far, FHA and VA have discouraged air conditioning by boosting minimum income requirements \$100 a month, though a good cooling system averages only \$120 a year operating cost in a small house properly shaded and fully insulated.

Much has been learned about how to install a better central system for less since Dallas builders first tried cooling to sell small houses four years ago and found the public not yet ready to pay the extra cost.

2. Indoor-outdoor living. That's what people move to the suburbs for. But few Dallas builders offer it.

3. Less housework. Almost every woman will go for a labor-

Hence Griffith



Dallas H.B.A.



The typical 1955 home in Dallas

Dallas H.B.A.



adds a bedroom to the 1951 model



Dallas H.B.A.

saving kitchen. With built-ins and the package mortgage you can often sell a whole new house equipped with oven, burner top, dishwasher, disposer, refrigerator, exhaust fan and home laundry for less cash than it takes to modernize the kitchen in an old house. But no Dallas builder under \$20,000 includes more than the disposer (quite common), range (rare) and dishwasher (fairly common).

4. Color. This is a great new sales tool that has to be handled right, but Dallas builders are just beginning to employ a color consultant.

5. Better design. Only a few Dallas builders pay enough for plans to get anything more than plan shop service.

6. Insulation. There is plenty of new data now to make adequate insulation worth far more in sales appeal than it costs.

But in hot Dallas few builders put any insulation in the walls or more than 2" in the ceiling. Now mortgage lenders are beginning to insist on more.

7. Good storage.

8. Trade-ins. See page 119.

9. Harder selling. Many houses might sell faster if the builder were out on the job to sell it himself or get a realtor to help him.

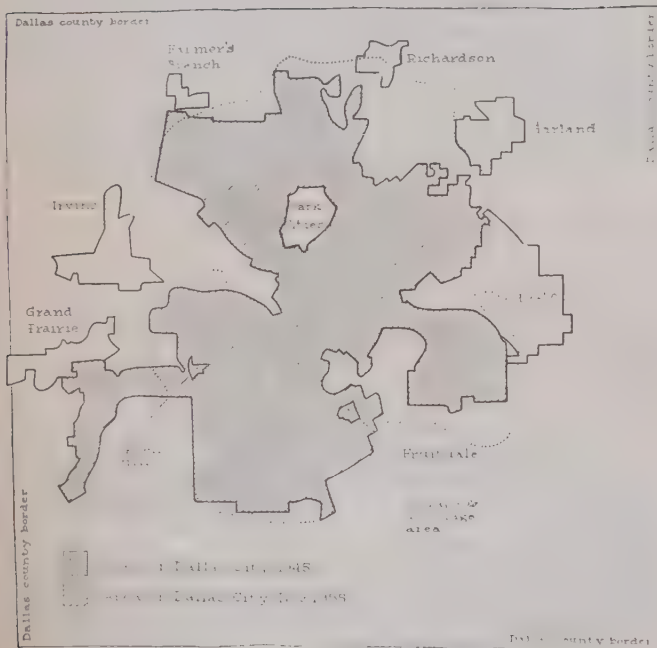
Unfortunately:

Some of these features take time to catch on. It's too bad more Dallas builders haven't been showing and publicizing the advantages of these new figures. If they had, more home owners would be dissatisfied with their old houses by now.

For 1956 the smarter builders are planning many changes

Competition will be much tougher in 1956 than it was in 1955 for builders who don't plan any changes in their models.

Probably the greatest single advance in home-building in Dallas this year will come out of new designs and materials offered by Architect Tom Scott Dean of Texas Industries, a masonry block manufacturer for which Dean is consultant. He has "engineered" several contemporary houses for low-cost mass-production with masonry blocks, and several Texas and Louisiana builders already have made plans to build \$6,000,000 of these houses. Whether any are built in Dallas depends on reaction of the local VA and FHA offices (see picture on opposite page, center).



Well-planned orderly city growth will bail out those whose houses have sold slowly, but meantime carrying charges are eating deep into their profits. This map indicates how fast Dallas is growing. The city has doubled its area from about 100 to 200 sq. mi. in ten years. Population has grown from 615,000 in 1950 to 800,000 now, is headed for 1,500,000 by 1975.

The city plan commission, headed by Marvin Springer, makes sure the growth is orderly. State law makes annexation easy, and Springer sees to it that developers provide all school locations (at raw acreage prices), sewerage and other improvements that home buyers need. Many Dallas builders are active in city government.

Milam & Roper, who provide plans for nearly half the Dallas builders, are advising all clients to eliminate the dining room completely, make living rooms bigger, and enlarge the kitchen-dining nook to make it a real family room. Most M&R clients will add sliding glass doors off the rear family rooms; some will add paved patios outside. Nearly all M&R clients will offer two-car garages, even if it means redividing to 70' lots. (M&R report bigger demand for a second garage space than for a second bath!)

The first completely contemporary houses (not only in appearance but in construction methods used) to be volume-built in Dallas will be introduced this month or next by Lewis & Lamberth. These will be structural brick, and L&L expects these \$15,000-\$18,000 houses will cost them much less than conventional houses the same size (about 1,500 sq. ft.).

Others planning improved models include Leland Lee (better traffic plan and two-car garages), the Melton brothers (\$9,000 two-bedroom, 1½-bath, two-carport houses with "all glass in the rear opening on patios"), Leslie Hill ("18,000 to \$25,000 houses fully air conditioned and as fully equipped as we can make them").

National Homes' Dealer Bailey Johnson expects to increase his sales this year in suburban Mesquite by shifting from frame to brick veneer models, offering 22 of the new NH plans. A number of these prefabs will include air conditioning, double carports, range, refrigerator and color kitchens at \$11,500 to \$12,000.

Some even plan to offer good modern design



Hence Griffith

This house was sold to the first couple who walked in on opening night at the Dallas' Parade of Homes last September. Builder Gordon Nichols, who previously had built contemporary houses only on contract, also took ten more orders for this \$19,000 air-conditioned home with fully-equipped kitchen. Now he has turned speculative builder, is starting to build 40 of these and other contemporary houses, all designed by Architect Tom Scott Dean.



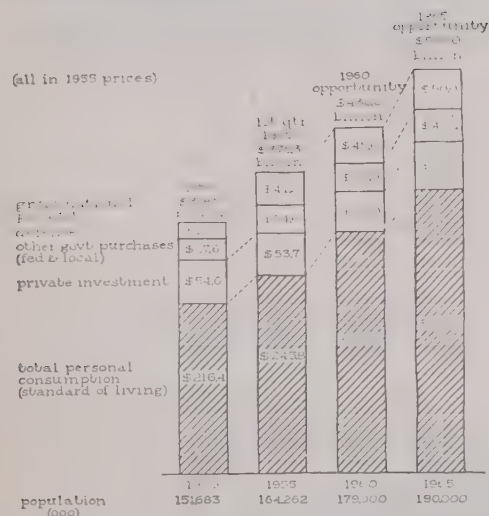
More than 100 of these \$12,500 air-conditioned houses will be built this year in Dallas by M. C. Cole, provided he and his architect, Tom Scott Dean, can persuade the VA to qualify the masonry block construction. In any case, Cole plans to build a large number of \$10,000 three-bedroom brick houses, designed by Fort Worth Architects Horton & Wright, using the same sloping roof design.



Hence Griffith

Tips Co. has sold half a dozen of these houses designed by Architect Bill Benson

Look at the soaring
standard of living



This graph was prepared by Dr. Arno Johnson, economist of the J. Walter Thompson Co., to show how fast the Standard of living will have to rise to achieve the \$500 billion economy the President envisions for 1955.

"It would be very easy to build too many houses if they were of the wrong type and placed in the wrong locations. It would appear to be difficult under current conditions, however, to build too many well designed and properly equipped houses located in desirable neighborhoods."

Statement issued August 1955
by the Trends & Policy Committee,
U. S. Savings & Loan League

Let's open our eyes! Let's open our minds!

Editor's note:

All prices and incomes cited in this editorial are in constant dollars.

And before you read the editorial let us assume you know as we do that there are many special or local conditions which call for special solutions. For example, we both know that:

1. Migration creates special needs. A vacant low-cost house in Portland, Me. is no help to a family looking for a low-cost house in Portland, Ore. We know that low-cost housing must still be built in new communities that do not have a surplus of cheap housing left over from before the war (though we do think it most significant that small house prices are now falling in Los Angeles).

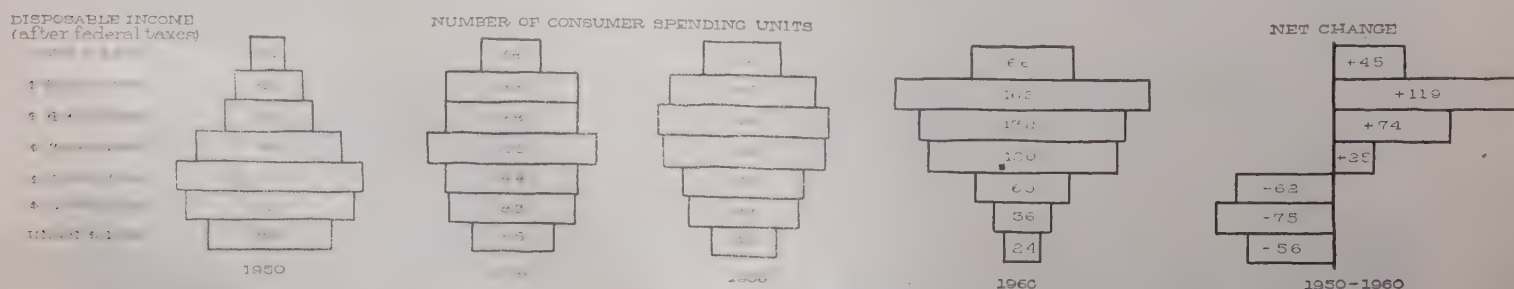
2. There is still no good answer to the need of decent low-cost housing close in to high-land-cost areas like New York and Chicago. (One answer might be the proposal presented by Gene Conser of NAREB for FHA-insured mortgages on individual apartments.)

3. Racial barriers create difficulties that may require low-rent new construction if growing minorities cannot expand into good old units.

4. Many small low-cost units will be needed for the aged, often in places where not enough of that kind of housing can be found or created in existing structures.

But just for once let's take our eyes off these special conditions and look at our problem whole.

Look how the income pyramid is turning upside down



Source: 1950 (on 1949 incomes) and 1954 (on 1953 incomes) from Federal Reserve Board Survey of Consumer Finances—Federal Reserve Bulletin, June and July 1954. 1956 estimated by Dr. Arno Johnson, on basis of income trends in 1955. 1960 estimated by Dr. Johnson on basis of possible \$430 billion Gross National Product and \$.20 billion of disposable income. These figures cannot be correlated directly with housing units, for more millions of families include two or more wage earners, i.e., consumer units. This graph is in 1955 dollars.

THE two most dangerous canards of 1955 were these:

1. We built too many new homes.
2. We built too few homes for lower-income families.

Let's start the New Year right by debunking these two untruths before they do serious harm to our industry and before they do still more serious harm to the American standard of housing.

Let's set the mortgage lenders straight. Let's set the Administration straight. Let's set Congress straight. Let's set the public housers straight. Let's set ourselves straight.

Let's call for answers to these three questions:

Question No. 1. How can anyone talk seriously about "over-building" until we build enough good housing to empty perhaps 6,000,000 old units no longer fit for human habitation.

Today these shameful units command inflated rents and prices for just one reason: We still have a tragic shortage of better housing. They are occupied for just one reason: somebody has to live there until we can build enough good housing to go around. Most of the people who live there can now afford much better homes—if the better homes were available.

Question No. 2. Why should we be urged and driven to build more cheap housing when even now the U.S. has a hangover surplus of at least 5,000,000 more low-cost units than we have low-income families left who can afford nothing better?

America is wiping out poverty so fast that the under \$3,000-a-year family is the Vanishing American. Their numbers have dropped from over 10 million in 1941 to around 4,500,000 today, will drop below 3,000,000 by 1960, will fall still lower by 1965.

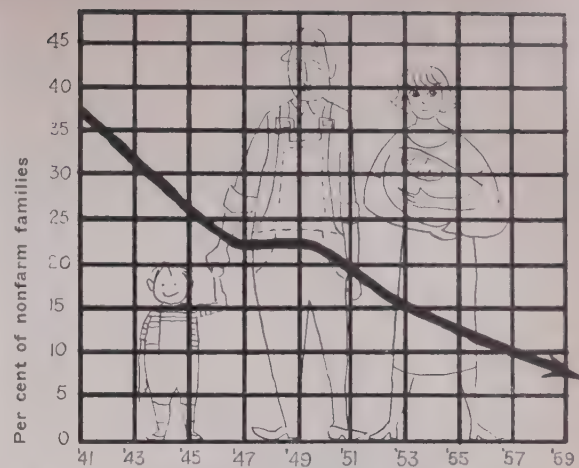
Why should we build more cheap units for a market that will be gone with the wind before a quarter of the mortgage is paid off? Let's fix up some of our surplus prewar housing to last until the need disappears.

Question No. 3. Where would the auto industry be today if its consumer credit were rationed (as ours is) to provide just one car apiece for the year's 900,000 net new households and get just 5% of the 6,000,000 hopeless junkers off the road?

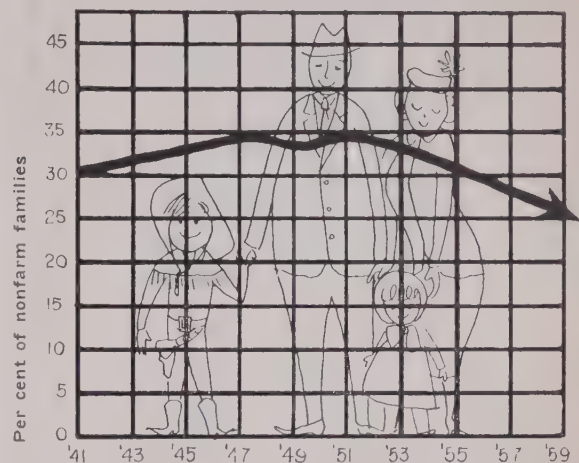
It's high time to learn a lesson from the automakers and stop thinking small about our industry, our market, and our responsibility for housing America much better.

So let's see what kind of homes—and how many—we will need for the \$500 billion-a-year economy President Eisenhower has declared "attainable and essential to our national security and well-being" in 1965. President Eisenhower is talking in constant dollars, so that means a 50% rise in the whole American standard of living within ten years—the American standard of housing included. (See graph, page 124, col. 1.)

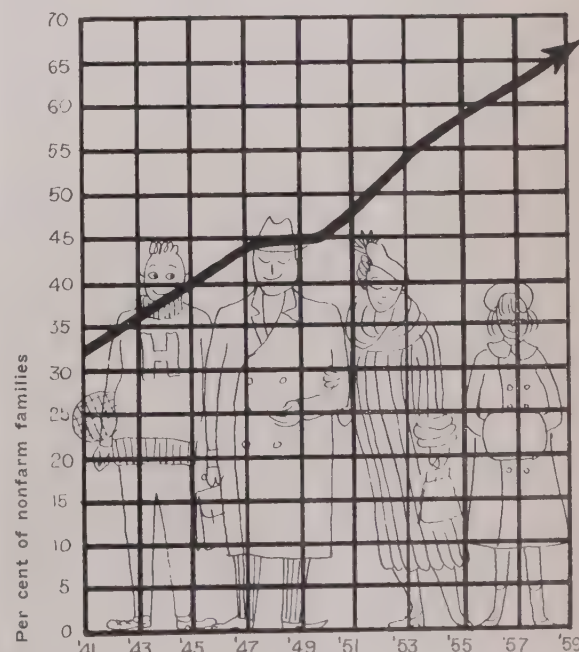
Let's stop thinking in terms of yesterday's half-as-rich America. Let's stop thinking about tomorrow as if it were yesterday. What may have been true in 1950 is no longer true in 1956; it will be still less true in 1960 and 1965. (continued)



The under \$3,000 group is losing families fast



The \$3,000 to \$4,999 income group has stopped growing



Families earning over \$5,000 are growing fast

	1941	1947	1950	1953	1959
Number of nonfarm families in thousands					
Under \$3,000	10,090	6,979	7,451	5,233	3,000
\$3,000 - 4,999	8,143	10,590	11,219	11,093	10,000
\$5,000 and over	8,607	13,556	15,470	19,302	25,500
Total	26,840	31,125	34,140	35,628	38,500

All figures have been adjusted to 1953 dollars to avoid distortion by inflationary trends. Figures for 1953 are taken directly from the March 1955 issue of *Survey of Current Business*, official publication of the US Department of Commerce. Figures for 1947 and 1950 are from the same source adjusted to 1953 dollars. Figures for 1959 are House & Home's projection of these 1947-1953 trends. Figures for 1941 are based on material underlying Selma Goldsmith et al. "Size Distribution of Income Since the Mid-Thirties," *The Review of Economics and Statistics*, Feb. 1954. Figures are before taxes and leave out unattached individuals because relatively few of them are prospective home buyers.

Says FORTUNE:

**The average family's income
will be \$8,000 by 1980;
that means it can afford a \$20,000 house!**

The most stupendous prediction that can be made about the U. S. economy, 1955-80, pivots upon one percentage point. The prediction is this:

U. S. productivity, which has been increasing at an average of 2% a year for nearly a century, will probably increase, over the next quarter-century, by an annual average of about 3%. If this extra percentage point materializes, it will remake America, and its effects will be felt everywhere in the world. . . .

If U. S. productivity rises at an average annual rate of only 2%, production per man-hour will double in 35 years, increase four times in 70 years, eight times in 105 years. But if American productivity rises at an annual rate of 3%, production per man-hour will double in less than 24 years, increase four times in 47 years, eight times in 70 years. The implications of 3% are staggering. . . .

The present generation of young Americans can reasonably expect, before 1980, to share in a living standard of chromatic variety and enormous quantity—enough to provide the average industrial worker with more purchasing power than the average junior executive has today. . . .

The national living standard, which has risen more than 65% in the past quarter-century, could rise much more in the next quarter-century. Spendable income per average family ought to rise from \$4,400 now to some \$8,000 (in 1955 dollars), and at the same time the average work week ought to decline from 41 to about 35 hours. (By the year 2000, spendable income per family unit could rise to more than \$15,000.)

The data on the years prior to 1870 are very crude, but they strongly suggest that the rate of increase from 1850 to 1870 was less than 1.5%. Between 1870 and 1920, however, the rate rose to 1.6%. Since 1920 productivity has been rising by 2.5%, and since 1947 by 2.9%. Thus the long-term trend for the whole economy, projected over the next 25 years, indicates an average increase in productivity of at least 3%.

There are many excellent reasons why the 3% rate should be achieved. . . .

1. Rising productivity begets rising productivity. For example, the construction of the railroads, which raised transportation productivity enormously, also generated higher farm productivity by giving farmers a reason to grow more. . . .

2. At the same time, invention and innovation have been accelerating. And not only is research being accelerated; its practical application is probably being accelerated still more. Automation and electronic computers are possibly no more revolutionary than past technical "revolutions," but the celerity with which they are being adopted probably will turn out to be revolutionary. . . .

3. . . . Wage pressures have been a powerful general stimulant to productivity.

*The whole housing market is exploding and turning upside down before us. Let's open our eyes. Let's open our minds.
And let's ask ourselves two key questions:*

Question No. 4. Why does the average family spend less of its rising income now than it used to spend to buy or rent a good home?

Why do we let every other dynamic industry outsell us year after year in competition for the consumer's bigger and bigger buying power?

Since 1929 the American standard of dress has doubled. The American standard of diet has soared. Spending for recreation has zoomed, and the American standard of transportation by car, train, and plane has climbed clear out of sight.

But many critics think the American standard of housing is actually lower today than it was in 1929, for old houses have been falling into decay faster than we have built good new houses to replace them.

Most of the old houses are still with us, 30 years older. We have built barely enough new homes to keep up with population growth—and most of them very small homes at that.

Question No. 5. Why don't we try harder to sell more houses to the millions of newly prosperous families who can afford to move to much better homes?

Why do we direct most of our sales effort at people who can barely afford to buy—people who can buy only if the Government guarantees their credit and lets them buy for next to nothing down and 30 years to pay?

There are 14 million more families now than there were in 1941 with incomes over \$5,000, i.e. families who could afford to pay \$12,500 or more (in constant 1953 dollars) to buy a home. We haven't sold more than 3,000,000 of them. Why don't we try harder to sell the other 12 million?

There are 6,000,000 more families who can afford to pay \$18,000 or more to buy a better home. We haven't sold more than 1,000,000 of them. Why don't we go out and sell the other 5,000,000?

There are several million less families now than there were in 1941 with incomes under \$5,000, i.e. less families who can't afford to pay \$12,500 for a home. We have already sold more 7,000,000 new houses since the war to this dwindling market. Why can't we take our eyes off these marginal buyers and go after the unsold millions who now have plenty of money to buy?

These three questions bring us at long last to the heart and center of the housing problem in America today. More specifically, they bring us straight to the heart and center of the home building industry's problem today.

Perhaps their importance will be clearer if we restate them a little differently:

Question No. 6. How can we compete more effectively and successfully with other industries? How can we begin getting our share of the bigger consumer spending?

That means, among other things: how fast and how far can we raise the efficiency and economy of our production to offer better and better value? For unless we offer much better value we can be very sure consumers will continue to spend their added dollars where they can get more for their money. They will continue to buy more television sets than bathtubs, more cars than kitchens.

Despite all our progress since the war, home building is still among the most wasteful and inefficient of industries. But the experience of these years has at last shown us what steps to take to cut our costs 30% or 40% and

so increase the value per dollar in our product 50% or more. The question now is: when will we take these steps? Among them are:

1. Industrial standardization, so we can build our houses with parts, not pieces. (See pages 130-133, 160-167.)
2. More and better use of better power tools (see pages 136-143.)
3. Mechanized material handling. This could save us \$1 billion a year. (See pages 136-137.)
4. Better design. This is the cheapest way to add value, for it costs no more to build a house planned for better living than a poor one.
5. Code reform.
6. Better land planning for more enjoyment of the land. Today most houses are as wasteful of their site as they are of labor and materials. (See pages 146-153.)
7. Streamlined distribution, with prices and markups based on the realities of tomorrow's industrialized home building instead of yesterday's handicraft.

Question No. 7. How can we unfreeze the ownership of 25 million owner-occupied houses and set those owners free to buy the far better homes most of them can now afford?

How can we begin to tap the \$100 billion equity in these 25 million homes to provide more-than-adequate down payments for a home building boom almost past all imagining?

Today there are millions of home owners living in \$12,000 houses who could afford \$20,000 or \$25,000 homes, millions of owners living in \$10,000 homes who could afford \$15,000 homes, millions of owners living in \$8,000 homes who could afford \$12,000 homes. The average renter moves every two or three years as his income lets him afford a nicer place. Millions of home owners would like to move too if they could get out of their present homes without taking too big a loss. Spot samplings in old houses in Indiana and new houses on Long Island both showed nearly half the owners wanted to move to a better home.

If we can get together with the realtors and make home ownership even half as fluid as trade-ins have made car ownership, we would have found the answer to 90% of our present problems. We would have found the answer to community facilities, for we would then be free to build the kind of new house every community would welcome. We would have found the one best way to help all American families, rich and poor, enjoy the far better homes they can now afford—and the still better homes they can afford tomorrow.

The automakers have not built a really cheap new car in nearly 30 years, for they cannot build a new car cheap enough to match the values car buyers get in the used car market. It is high time for us to learn the same lesson:

We cannot raise the American standard of housing by feeding cheap houses in at the bottom.

We can raise the American standard of housing only by building good houses and making trade-up work through trade-ins.

Then each new house, like each new car, would start half a dozen families playing musical chairs with houses as they now do with cars, with each family moving to a nicer home and leaving a junker vacant at the end of the game, ready to be torn down.

* * *

These are our great problems: 1) how to offer far better values and so get a better share of the bigger consumer dollar; 2) how to unfreeze the ownership of homes and so tap the \$100 million equity now tied up in old houses.

The faster we solve these two big problems the sooner we can forget about fictitious issues like overbuilding and get down to matters like where can we get the mortgage money, where can we get the labor, where can we get the materials, where can we get the land and how can we get the community facilities we will need to rehouse America as America can soon afford to be rehoused.

Will home building get its share of this bigger spending?

FORTUNE Thinks Not, Because . . .

1. Consumers, no matter how prosperous they become, will tend to spend their money where they get the most of it.

For example: it is often said that "nobody" (meaning only a couple of million Americans) can afford servants today." Actually plenty of Americans, probably more of them than ever before, could "afford" servants, but they don't have them simply because they can get so much more for their money elsewhere.

Because keeping a servant costs as much as keeping three motorcars or carrying a \$50,000 house, many well-to-do people prefer to spend the money on luxuries other than servants. If keeping a servant in 1980 costs as much as keeping three motorcars and carrying a \$75,000 house, well-to-do-people will tend more than ever not to "afford" full-time servants. . . .

2. So consumers will tend to spend their money on those goods whose productivity has kept up with or bettered the average, and will tend to pass up those whose productivity has not. . . .

3. The least progressive industry is construction, which has probably been increasing its productivity at less than 1.5% a year. (Some studies show practically no increase at all.)

The industry's backwardness is partly because much of the construction dollar goes into repair work (including painting and plumbing), whose efficiency is notoriously low, partly because the industry is made up of thousands of small-scale operators who are ridden by restrictive practices, and handicapped by weather, building codes, and their own inertia. . . .

. . . Yet it is evident to anyone who has looked closely at the building industry that it has been making progress in recent years. House contractors have reduced costs and prices not only by mass buying, but by efficient organization of man-power and material handling. If the prefabricated house continues to gain popularity, it may mount a breakthrough in the productivity of house building. And the repair business is encountering stiff competition on the part of millions of do-it-yourselfers, who in 1953 laid down 50% of all the asphalt-tile flooring, applied 75% of the paint, and pasted up 60% of the wallpaper bought in the U. S. . . .

. . . Industrial and commercial contractors are improving their efficiency by means of precast concrete parts, prefabricated forms, and by such practices as pouring cement in all kinds of weather. Highway construction is vastly more efficient than it was even 20 years ago. Moreover, the pressure of rising productivity in other industries, which is driving the already high price of construction labor to still higher levels, should make for additional improvement.



A TOP BUILDERS' HOUSE ARCHITECT



Here are some of his volume built houses



Photos: Robert C. Lautman





...TRIES A NEW HOUSE FOR TOMORROW

At 49 Charles M. Goodman has few rivals for the title, "production house architect." Since World War II 32,500 Goodman-designed houses have been built in the U.S.

In this house (above) which he has just built for himself, Goodman tested new ideas that may soon be adopted in many successful builder houses:

1. a cost-cutting construction technique that requires no finish carpentry on the site (see pp. 130-131) ;
2. a way to borrow "prefab" money-saving techniques and use them even in one-at-a-time houses (see p. 132) ;
3. a half dozen new uses for familiar old materials and for other materials that are brand new to home building (see p. 133) ;
4. a method for making open-plan houses look bigger (see p. 134) ;
5. a site arrangement that uses the land between neighboring houses for outdoor living (see p. 135) .

The production houses shown on the opposite page are typical of Goodman's recent work in this field. They show innovations which have been widely accepted from coast to coast. As architect for the nation's largest prefabricator and for leading builders in the Washington area, Goodman qualifies as an expert on the mass market. On the following pages he shows his new house, explains his ideas and gives his views of the future.

Says Goodman about home building, "To paraphrase a famous saying, the only thing we have to change is our attitude to change itself. US industry prospers by constant change. Unless we in home building become mentally and emotionally conditioned to constant change, we will never become an industry."

Last month, Architect Goodman entertained a visitor who wanted to see what Goodman's house could teach him

Visitor: I haven't done any modern houses. **Most other builders tell me modern houses cost much more than traditional ones.** Your house looks simple enough, but simple-looking things often cost more.

Goodman: **There's no reason why they should**—my own house is proof of that.

Visitor: How?

Goodman: Well, when you build a traditional house, you really build two houses. First, rough carpenters who are fast and inaccurate, put up the framing. Then you call in the finish men. They are slow, expensive, and accurate, and in effect they build a second house around the rough framing.

Visitor: That's about right.

Goodman: Now in modern houses we try to express and expose the structure. This means our "rough" framing has to be accurate and so we end up using finish men on most of the work.

Visitor: And that's where I go broke.

Goodman: You do if you try to build entirely on the site. That would mean you'd have your finish men working on the exposed structure and structural millwork out in the open. And that's an expensive proposition.

Visitor: You said you had licked the problem.

Goodman: Yes, we licked the cost problem by building our house in a shop instead of on the site. We had our finish men work under cover, with power tools and jig tables. And we used our rough men on the site to assemble the things our finish men had made in the shop.

Visitor: What did they make in the shop?

Goodman: We designed a series of identical millwork frames, 8' wide and 10' high, made up of the simplest cross-sections that anyone with a table saw and a dado-head can turn out for himself from 2" x 6"s or 2" x 8"s. These millwork sections were glued together on a jig table in the shop, to precise dimensions.

Visitor: But you didn't fill all the frames with glass?

Goodman: No, some were glass, some part glass, part siding. Those around our patio we left entirely open. **We made up 21 frames in all**, and each frame had a long spline glued into it on one side.

Visitor: You used the splines to connect the frames?

Goodman: That's right. The next frame has a dado cut along its edge, and the spline fits into that dado.



Wall panels (left) for Goodman house were fabricated in a shop, are shown stacked up after arrival on the job. To use highly paid, finish carpenters to best advantage, Goodman put them to work under cover, where the men would have power tools and jig tables to speed the precision work. House required 21 wall panels in all. Each measured 8' wide by 10' high.

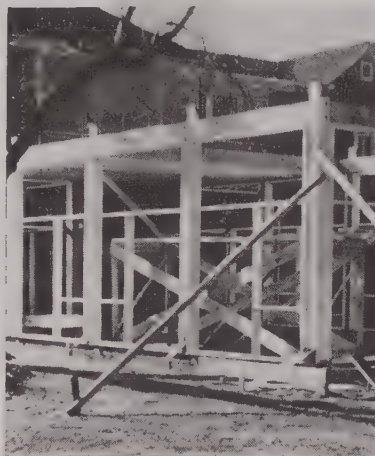
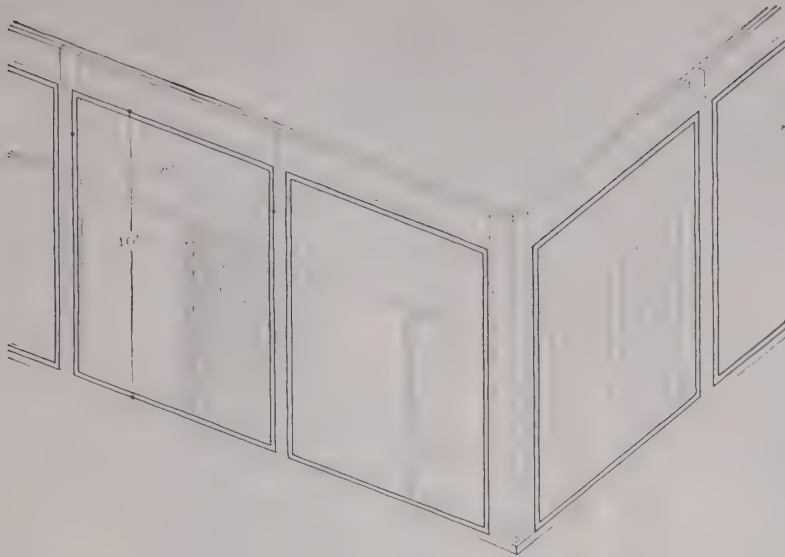


Diagram (opposite) shows how the panels were fitted together. All rough framing in the walls was eliminated because each panel-connection forms a strong, wooden H-column made up of three 2" x 8"s.

Millwork panels (left) are now beginning to go up. Adjoining frames were connected by a spline that fits into a dado cut along the vertical edges of each frame. A continuous header of two 2" x 12"s connects the splines, lines up and braces the panels, and will soon carry the roof-joists.

New wing of Goodman house (below) is now all assembled and closed in. It took three carpenters two days to put up all the walls. Some of the panels are all glass, others are part glass, part siding. Horizontal rail is at 7' door height, carries curtain track on the inside.





Goodman on carpentry:

Modern design + conventional carpentry = high costs

Modern design + modern carpentry = economy, strength



Visitor: Did it take long to put up the walls?

Goodman: It took only two days for three carpenters to put up all the frames. Of course the slab wasn't accurate down to $\frac{1}{8}$ "—slabs never are. But it was a cinch to plane down the edges of the splines and take up any inaccuracies that way. You see, the men start at one corner and then they put up the next wall panel and then the next. You have a slightly different detail for the splines at all corners—just a simple rabbet.

Visitor: Where did you put your studs?

Goodman: The really great thing about this system is that it allowed us to leave out the structure . . .

Visitor: It what?

Goodman: It let us skip the rough framing altogether. At these panel-connections you get a perfect, wooden H-column, just about the strongest structural column shape you can find. And you get it without the slightest waste of material. Some builders use twice the material they need for structural strength. First they put up studs, 16" on centers. Then they cover the studs with enough material to hold up two additional houses.

In our house, we use every stick of wood and we use it well. We don't waste any of it. Every 2" x 8" is put to work twice: first as a surround for



a panel, and next as the flange of a column.

Visitor: What about the roof?

Goodman: It's supported on a continuous lintel of two 2" x 12"s that are bolted into the spline. The lintel then supports the roof joists.

Visitor: So even the lintel is put to work twice?

Goodman: That's correct, it not only lines up and stiffens all the panels, it also supports the roof.

Visitor: Your system can really work with any roof, can't it?

Goodman: Sure. You can use a flat roof without overhangs, as we did. Or you can use a flat roof with overhangs, in which case you just rest your joists on top of the lintel. And, of course, you can use pitched roof trusses, etc. in the same way.



Typical 8' by 10' panel silhouetted against façade: 21 similar panels form the walls.

Goodman on millwork: fabricate in the shop, assemble on the site



Remodeled old wing has new inserts of glass. These were shop-fabricated just like the panels in new wing.

Visitor: You are really sold on this new structural system?

Goodman: Completely. It even worked in the remodeling of the old house, in which we have lived for years. I have been talking only about the new wing so far, but even in the old house, where we put in big glass walls, we made those walls in a shop. Then we shipped them to the

site, fully glazed. And only then did we rip open the old walls for the rough opening.

Opening up the wall and closing it again with the glass panels took only a few hours. This was in the middle of winter, and while we were actually living in the old house.

But the real moral of our construction story, I think, is this: **When you have precision**

work to be done, do it under cover where your skilled men can work best and take the most advantage of power tools and jigs. And then let the assembly of the finished parts of your house be done by rough carpenters on the site, with no chance of error and no waste of time.

Visitor: But this kind of prefabrication—I guess that's what it is

—pays off only for big builders, doesn't it?

Goodman: No indeed, it paid off in our own, one-time house, and it is now paying off for my relatively small builder-clients outside Washington. **All you need, in the way of a plant, is a table saw with a couple of accessories, and a big shed in which to work.** Almost any builder has that.

Visitor: Didn't you use a lot of new materials?

Goodman: No—all we did was use old materials in new ways. We used flooring on the ceiling, for example.

Visitor: Why?

Goodman: I like the color and texture of wood, its acoustic qualities, its ease of maintenance. We used mirrors for the back-splash in our kitchen to make

the kitchen surfaces look bigger and to help light them up.

Visitor: Your kitchen fans look unusual.

Goodman: Those are roof ventilators generally used in factories.

Visitor: What about your finishes?

Goodman: We found a "color developer" manufactured for the photographic industry, and we used that to finish the wood.

Visitor: There must be lots of stuff we have passed up till now.

Goodman: I wish you could see my office. It's crammed full with catalogues, samples, bits and pieces of equipment, new extrusions in metals and plastics. Some of the things I collect aren't even made for the home building industry at all. We haven't even begun to exhaust the materials and gadgets available to us today.



Goodman on materials:

Never skimp on imagination



Wood flooring used as horizontal and vertical siding (above) and as ceiling finish (below). Goodman likes to experiment with new materials and finishes, finds many useful ones outside homebuilding.



Visitor: Mr. Goodman, so far you haven't said anything about the plan ideas in your house.

Goodman: I suppose the chief problem in most builder houses today is to make a small house on a small lot look bigger and act bigger. My house isn't small, but our planning ideas are even more valid in the smaller house.

Visitor: How can you apply them if you don't have the space?

Goodman: You have to give even more careful thought to planning in a small house, because in a small house you have to make every inch count. Now, our house has an "open plan" like most good builder houses today. But our open plan is not just one big room that you see all at once as you walk in the front door.

Visitor: That's one thing I don't like about many modern houses.

Goodman: If you come into an open plan living area and can take in everything at first glance the house seems small. You've lost the feeling that there's more than you can see, the traditional feeling of being in a house.

Visitor: How did you prevent that in your own house?

Goodman: Let me take you on a conducted tour. We'll start at the front door and walk right through the house. (1) All we can see at first is the entry area plus a small corner of the living room. The rest is shielded by the fireplace.

Let's go on. We are now looking straight back in the direction from which we came, and yet we see something new again: a spacious patio, and a lawn (2).

Continuing on our way . . . as we walk up toward the old house, we get another new view to the left (3)—trees, flowers, lawn. The house unfolds before you gradually, not all at once.

Visitor: So your house looks big partly because it's so full of different things to see?

Goodman: Exactly. And the same principle applies to any builder house, however small. An open plan isn't just an empty plan—it has to be handled in a very subtle way to keep it from being boring and obvious. By the way, we did the same thing in planning the outdoors.

Visitor: How?

Goodman: We used a lot of little elements: fences, pools, retaining walls, paved areas and so on. They make the garden much more interesting to look at because

there's so much to see. A plain lawn can get very dull. This site plan (opposite) shows how a lawn can be divided up and made more interesting.

Visitor: One last question: can a builder expect to get help from his architect on all these things that you've been talking about?

Goodman: Certainly. Architects aren't just exterior decorators. They have to develop a complete, economical structural system with which to design. They have to be experts on materials and finishes. They have to be planners. They shouldn't try to "package" a mediocre product to make it sell better, but to make the product better all the way through: better in its structure, better in its plan, better in its appearance, better in its economics, more delightful to live in—and thus easier to sell.

Goodman on planning: Dividers make open plan look big and interesting

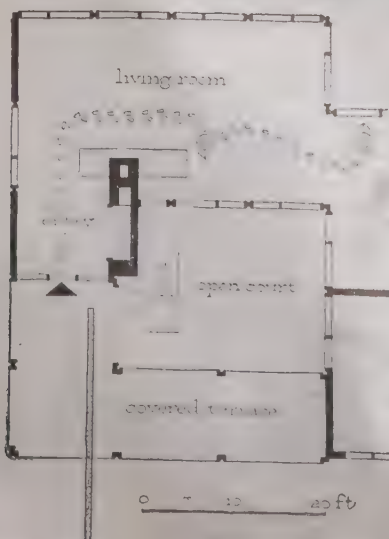


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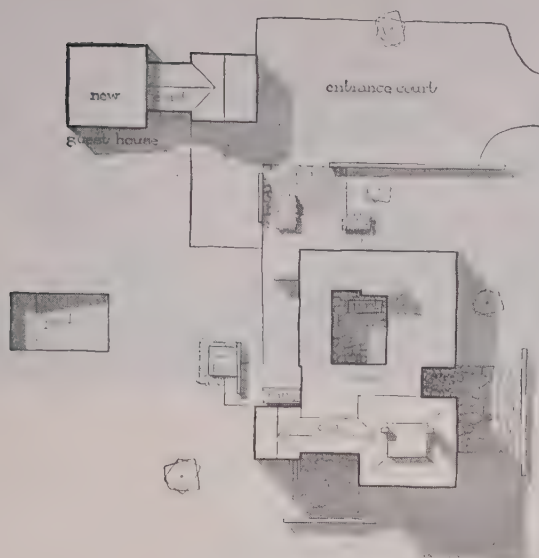
Divisions in open plan help to screen parts of the living room, thus create areas of privacy. (Plan and photos numbered to show tour through house.)



3.



**Goodman on outdoor living:
Site houses to shield each other**



Site plan (left) shows how Goodman used free-standing retaining walls, paved terraces, fences and other buildings to create space divisions outdoors. Result is similar to that obtained inside the house: a series of views that change as you walk around and a series of shielded areas for outdoor living. The most intimate outdoor area, the semienclosed patio is shown above.



And here is the first builder house based entirely on all these experiments

At Hollin Hills, Va., Goodman's client, Builder Robert Davenport, has now completed and sold more than 30 houses like the one shown above. All of them use the same structural system Goodman pioneered in his own

house, except that all shop-fabricated wall panels are 12' wide instead of 8'. Goodman found the 12' dimension gave him a good bedroom width and two panels added up to a good living room length./END



Photos: Walter Daran

Round Table explores how to speed great savings from mechanization

Why is our industry so slow to realize the great economies offered by power tools and power handling of materials in unit loads? And what can be done to cash in on those savings faster?

Detailed answers to those billion dollar questions were agreed to last month at a Round Table jointly sponsored by HOUSE & HOME, The Prefabricated Home Manufacturers Institute, and the Lumber Dealers Research Council.

On the next seven pages you will find Part I of their report, dealing mostly with how to save more money with power tools. Part II will be published in our next issue, dealing mostly with how to save more money through mechanical materials handling.

The panel

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TRENCHING EQUIPMENT

ROBERT W. HUMES
Sherman Products, Inc.

J. A. PENOTE, vice president and general sales
manager
Cleveland Trencher Co.

FORMING EQUIPMENT

CHARLES A. SNYDER, chairman of the executive
committee
Richmond Screw Anchor Co., Inc.

TRUCKERS

ROY ROBINSON, president
Pre-Fab Transit Co.

MATERIALS HANDLING

JAMES H. W. CONKLIN, general sales manager
*Phila. division
Yale & Towne Manufacturing Co.*

R. H. DAVIES, vice president
Clark Equipment Co.

R. L. FAIRBANK, sales manager
Tow Motor Corp.

RICHARD JAY, sales manager
Gar Wood Industries, Inc.

DAVID MULLIGAN, vice president
American Tractor Corp.

ROBERT F. MOODY, sales manager
Hyster Co.

RUSSELL A. MOORE, sales manager Traveloader
Baker-Raulang Co.

POWER MACHINERY

NELSON THOMPSON, vice president and general
sales manager
Homelite Corp.

CONVEYORS

PAUL R. HATCHER, manager
*Materials Handling Div., Richards-Wilcox
Manufacturing Co.*

\$1 billion saving makes essential better team work in our industry

Last of the great industries, home building is now well started on its industrial revolution.

Eventually this industrialization will let us produce much better houses for much less money. It will let us share with home buyers the great savings offered by industrial standardization and industrial mechanization.

But right now today the sober truth is that:

We have hardly touched the \$1 billion-a-year savings offered by industrial standardization. We cannot realize those savings until we translate today's near-miss standards into usable standards to which all building component manufacturers can design a great variety of products that will fit together with minimum waste of material and minimum waste of labor.

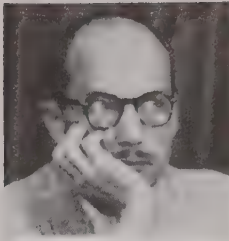
To provide a basis for those more precise standards has been the goal of five earlier Round Tables in 1955.

We have hardly scratched the surface of the \$1 billion-a-year-plus savings offered by industrial mechanization.* So the manufacturers assure us, and we agree. We cannot achieve more than a fraction of those savings without much better team work between architects, builders, lumber dealers, common carriers, manufacturers of building products, and manufacturers of all the varied tools by which building components are shaped or fastened or moved. We cannot achieve those savings without much better communication throughout our industry, better understanding, better selling. At many points we cannot achieve those savings until manufacturers study our needs more closely and develop new machinery to meet those needs.

Too many builders and their architects are planning houses based on their knowledge of yesterday's tools. Too many manufacturers are offering tools based on their knowledge of yesterday's houses and yesterday's building materials.

To provide a basis for that better understanding and that better team work is the purpose of this Round Table.

*Of course some builders have scratched the surface deeper than others. Most prefabricators and a few large builders have scratched pretty deep.



Lendrum: A good power cutting job is \$400 to \$500 a house cheaper than a hand job.

Mechanization is a broad subject. It covers mechanization of the tools by which building parts are cut and shaped, the tools by which building parts are fastened together, the tools by which the site is prepared for building. It also covers mechanization of the handling of materials in transit, at the mill or factory, at the lumber yard, and at the site.

Each of these six uses presents a different problem. For example:

Cutting is now in transition, shifting from site to lumber yard or factory.

Fastening cannot be mechanized without a whole new set of tools, for nailing and gluing.

Site preparation is almost 100% mechanized already on large tracts, but smaller builders need a new kind of multipurpose unit.

Materials handling in transit requires new-model railroad cars and trucks.

Better materials handling in the yards must often wait for new yards rather than new equipment.

No one knows the best answer to better materials handling at the site.

But all the aspects of industrial mechanization are inextricably interrelated one with another, and inextricably interrelated with industrial standardization. The more we standardize dimensions, the further back in the industrial process we can do the cutting and dimensioning. The more efficiently we mechanize the cutting, the more important it becomes to mechanize the handling. The more we mechanize the handling at one point, the more important it becomes not to lose that saving for want of mechanized handling at some other point.

So, before we study the problem of mechanization bit by bit, we must first consider the problem whole.

Here are two examples of the great savings offered by mechanization

1. Carpenter labor costs can be cut 20 % by substituting power tools to cut and shape components for hand labor. Perhaps equally important, power tools offer a built-in accuracy to match the best work of yesterday's artisans. With today's high level of wages there is no question in any of our minds that every possible cutting operation should be mechanized. The only question is what cutting should be done at the site or what cutting can best be done at factory or lumber yard, where more expensive equipment can be installed and kept busy. (Many yards have found they can save the entire cost of their lumber precutting service by making better use of odd lengths and by cutting out defects and so upgrading their lumber.)

2. Materials handling costs can be cut 50 % if manufacturers, railroads, car builders, truck builders, lumber yards, builders, prefabricators, and material handling equipment makers all work together to develop and use the most economical means of handling materials from start to finish. This is another way of saying that efficient materials handling can cut home building costs by more than \$1 billion a year, for some informed estimates suggest that more than 25% of today's home building cost lies in materials handling from mill to final erection.

It is easy enough for us to agree that

1. Mechanization offers these billion dollar savings;
2. These savings are essential to the long range progress and prosperity of our industry;
3. In the more competitive years ahead builders and lumber dealers who do not take advantage of these savings will find it hard to stay in business;
4. Building product manufacturers will find sales hard to hold against competition if they do not adapt their product and their packaging to the mechanization needs of their customers and distributors;
5. Mechanization is the only way we can spread our available labor over the great increase in home building volume that is sure to tax all our resources in the sixties.

But all this is easier said than done

The closer we study mechanization the clearer we see there is no quick and easy way to get everybody in our industry to take full advantage of its economies. We have no short cut to recommend, but we do believe a clearer understanding of the problem may help us all to work together better and so speed the progress of mechanization.

Here, briefly are some of the problems:

Problem No. 1: the builder and the reluctant artisan

Our discussions have revealed a marketing paradox. If you want to sell more portable tools for use at the site you must often sell them over the head of the man who will give you the order. Here is a case where the most important man is not the buyer.

Most portable power tools are bought by carpenters, electricians, and small carpenter builders, and we are agreed that this is where their ownership should lie, for then the men who actually use these tools will take better care of them. But the demand for more labor-saving tools has not and will not come from the artisans, subcontractors, and small contractors who actually buy them. There is no use expecting any tradesman to get excited about a new way to make his bill smaller. On the contrary, the carpenters

(even though they are the least obstructionist of building labor) fought the introduction of these labor-saving tools for years and in some places still raise major obstacles to their use.

Most carpenters have now learned to like power tools because they make their work easier and pleasanter. But the big pressure to increase their use has not and will not come from men who charge by the hour. It has come and will continue to come from men whose profit depends on reducing the number of man hours worked: i.e., from the merchant builders and, most particularly, the larger builders.

For example:

Example No. 1—the portable electric saw came on the market around 1913 but it did not come into any broad use

until World War II, when the big builders working on army contracts forced its acceptance.

Example No. 2—the only way big builder Levitt could persuade his subs to give portable power tools a trial was to buy them for his own account and lend them to the workmen. Two years later he was able to sell all of them to the subs second hand, and today he owns no power tools at all.

Most merchant builders try to own as little equipment as possible, preferring to have the ownership lie with their subcontractors. Nevertheless, the customers among us are unanimous in assuring the manufacturers that the merchant builder is the No. 1 buying influence and the first man to sell in the market for all mechanical equipment to be used at the site.

Problem No. 2: the chicken and the egg

Again and again we run into the question of who should make the first move towards mechanization. For example:

Should the architect work out his design to take full advantage of mechanical equipment and then persuade his builder

to install it? Or should the builder mechanize and then look for an architect who will take full advantage of his equipment?

Should the lumber yard equip for mechanical unloading of freight cars

before the mills are ready to offer unit loads on the cars? Or should the lumber mills equip for unit loading (at a first cost of about \$80,000 per \$1,000,000 of sales) when only one lumber yard in ten is equipped to unload them?

Problem No. 3: the horizontal manufacturer

Home building is just one among many industries served by the power tool and materials handling manufacturers.

On the good side this means home building benefits by quantity production economies that would be impossible if ours were their only market. It also means that the manufacturers have had the volume needed to carry many of their products to a high point of perfection; for example, saws that cut to a tolerance

of thousandths, saws whose accepted blade speed is 15,000' per minute, saws that are controlled by a punch tape.

On the bad side it means that few of these manufacturers have had time to study our needs, which are often quite special. Few have had time even to do a special educational selling job to help us see how we can best use their equipment.

As a result, some of the tools we need most are not available. Some of the tools

available need minor changes to be much more useful. And most of the available tools are not used in home building as widely or as wisely as they should be.

The customers among us believe that, as America's third largest industry, home building now offers such a profitable sales potential that some smart manufacturers could hit the jackpot by establishing closer contacts throughout our industry and focusing more effort directly on its needs.

Problem No. 4: the ½-hr.-a-day user



Harnischfeger: The higher your volume the more kinds of tool you can use.



Bauer: If you don't build 20 or 25 houses a year you can't use your tools more than 50% of the time.



Scholz: I don't believe even the smallest builder can afford to hang his own doors.

Here is another paradox. Any builder who does not use power tools to cut his costs will find it hard to stay in business; but mechanization works so fast that small builders who buy their own tools often find it hard to take full advantage of their efficiency. For example:

With a router a carpenter can fit and hang 20, 30 or more doors in a day instead of six. But the average house has only eight doors!

With a forklift a laborer can pick up a ton at a time and move it 40' in less than a minute. But that means he can move all the materials for a whole house from road to site in less than an hour!

The speed with which cutting tools work is one more reason why small builders prefer to have their subcontractors own

their portable tools, for they can then carry their tools from job to job and keep them in use. It is one more reason why many builders, both large and small, think cutting should be concentrated in mills, factories, and lumber yards, where the first cost of more expensive (and efficient) tools can be justified by keeping them busy most of the time.

The smaller the builder, the less profitable he finds it to tie up his own money in machinery, for if a tool fast enough for 100 houses a year can be used on only five the capital cost per house is 20 times as big. That is one good reason why a recent University of California survey of Bay Region builders showed that builders of 25 or more houses average more than three times as big an investment in tools and equipment as builders of less than ten houses a year.



Meyer: The power tool manufacturers have built into the power tool the accuracy that your grandfather had in his hands.



Knox: I would rather pay \$5,000 and get a saw that will do the job.



Steidle: Instead of boring one hole at a time we are boring 25!

Problem No. 5: the forgotten architect

Many mechanization savings can be realized only if the architect designs the house to take advantage of them. Architects have been pioneers in modular coordination and dimensional standardization. They are now creating a new architectural style much better suited to today's production methods than any of

the traditional styles, most of which developed before we even had iron nails to hold boards together.

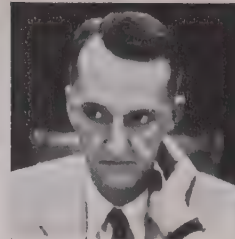
We believe all this makes it important to keep architects up to date on what the new tools and materials handling equipment can do, important to help them figure out ways to design to take full

advantage of the mechanization.

It is important to inform the custom architect who is pioneering the new architecture. It is still more important to inform the production architect, who is fast winning acceptance as the industrial designer of our industry and will soon be designing more than half the new houses.



Moeling: Let's talk about cutting at the lumber yard.



Thompson: The less cutting has to be done at the site the better for the builder.



Zerble: We want more parts and less pieces, but there isn't a lumber yard in my town equipped to do the cutting for me.

Problem No. 6: the uneven revolutions

Revolutionary changes are taking place simultaneously in home building, prefabrication, and lumber dealing.

When these simultaneous revolutions are completed we believe most materials handling will be mechanized and most components will be precut, predrilled, and often prefitted off the site in a prefabricator's factory, or a volume builder's shed, or a local lumber yard, or a lumber mill, or a manufacturer's plant. We are agreed that the further back in the production line the cutting can be pushed, the better; the less cutting and fitting has to be done at the site the better for everyone, including the cutting tool manufacturer.

But progress in these revolutions has been very uneven. The builder who wants to buy all his lumber precut may find it hard to find a local lumber yard prepared to offer this service, for less than half the 26,000 yards are so equipped. Conversely the precutting yards will find that many small builders are really self-employed carpenters who do not plan their houses carefully enough to permit pre-

cutting and who might prefer to spread their self-employment further by doing their own cutting, rather than pay to have it done for them.

Until and unless the components come to the site precut these four cutting tools will be needed (often in multiple) on almost every house, owned either by the builder or, more often, bought at his insistence by his subs:

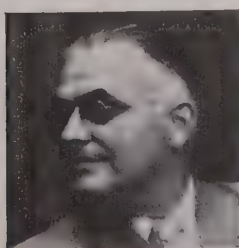
1. A heavy duty 7" or 8" portable saw (about \$85 to \$140);
2. A 1/4-in. heavy duty drill (about \$15);
3. A portable electric router for cabinet work, hanging doors, and cutting off butts and jambs (about \$52.50);
4. A radial saw (about \$400-\$450), with a trailer to put it on (about \$125) and a \$10 cover. This is the power tool carpenters use most and like best.
5. A generator if he is building before the power lines reach his site.

The need for all these on-site cutting

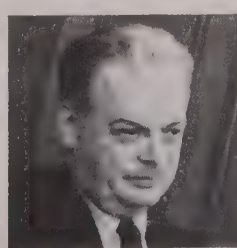
tools will diminish as the cutting moves further back up the production line. The greater availability of prehung doors and factory built cabinets is cutting into the market for routers just as this fine tool is winning wide acceptance. But even the prefabricators recommend that all their builders own a power drill; and except on true prefabs portable saws will always be useful at the job to correct errors and oversights and handle last minute changes for the home buyer.

In the long run moving the cutting back from the site will create a bigger power tool market, for much more expensive and efficient cutting tools can be used where cutting can be concentrated.

Up to now power tool progress has concentrated on the substitution of mechanical power and mechanical skill for human muscles and human skills on relatively simple single operations. The concentration of cutting in yards and factories will permit a second long step forward—the development of multiple operation tools.



Humes: We have attachments to do lots of things.



Haeger: We would love to have a machine that would help us nail dry wall, and sheathing.



Lytle: If you could put an air compressor on the tractor, that would be wonderful.



Jones: Would you like a generator under the hood of your car or truck that would run up to 5 h.p. motors?

Big machines have cut site costs; now we need a small jack-of-all-jobs

Site preparation is already the most highly mechanized and therefore the most efficient and economical part of home building. Bulldozers are clearing the site, and grading the land at a fraction of yesterday's hand shovel cost. Sheepfoot rollers are compacting level building lots on hillside sites which were thought impossible just a few years ago. Trenchers are making slab house foundations ready to pour in half an hour, digging sewer and water supply trenches equally fast. Prefabricated forms are speeding accurate and economical foundations. Big road-laying machines are putting in streets cheaper in 1956 than they could be laid in 1948.

Almost all today's site preparation equipment is expensive (\$9,000 to \$100,000) special purpose machinery. It does its job so fast that even a big builder can seldom keep it busy enough to justify owning it himself. Almost always it is owned by a subcontractor who moves it from job to job, some times taking it to

another home builder's tract, often using it for some other industry's needs. (One subcontractor in Los Angeles has used his trenchers to dig foundations for 51,000 houses by hundreds of different builders.)

Nevertheless the one best way to increase the use (and thereby the sale) of site preparation equipment is to teach more builders (and their architects and site planners) how to take fuller advantage of all the savings and efficiencies it offers.

But this better understanding of how to use the subcontractors' highly specialized equipment is not the whole answer.

Our industry urgently needs a brand new kind of multipurpose unit for use at the site—a unit that medium-sized builders could own themselves and shift quickly and easily from one kind of work to another, thereby keeping it busy a large part of the time. If, with various attachments, the same mobile power plant

could be used to unload and move materials, dig trenches and foundations, finish grading the site, vibrate cement, and generate power to run tools and compressors for paint sprays and pneumatic nailers on tracts out beyond the power line, we believe many builders would find this new tool as essential as they now find a pick-up truck. Preferably it should be on treads rather than tires, for two reasons:

1. because it might often have to operate on rough ground and over ditches, and
2. because foundation walls require an accuracy that might be difficult to maintain on rubber tires, which might skid an inch or two off the line.

We are more than pleased to learn that several combination units of this type may soon be available for around \$5,000, and we recommend that all large and medium-sized builders give careful study to the savings they might make possible.

Better tools to fasten parts together are the tool makers' big new challenge

The new portable tool that builders and prefabricators are most eager to use is not yet available—a self-feeding pneumatic (or perhaps electric) nailer as light as a portable saw that will drive 60 or more regular nails a minute, not just down, but also up or at any angle. No nailer now on the market meets these specifications, but some of them come close enough to encourage us to hope that what we want can be developed soon.

Important today, such a tool will become relatively more and more important as cutting moves back from the site to the mill, factory, lumber yard or shed. In fact, some prefabricators think the day will come when such tools for fastening presized parts together will be the only erection tools needed at the site.

When the Detroit builders gave their Home Show house as a prize for guessing the number of nails required in its construction, the right answer was 59,000.

The nail demonstration house built at Virginia Polytechnic Institute used 65,910 nails, including 12,900 framing nails, 9,000 sheathing nails, 4,000 building nails, 7,000 casing nails, 7,500 shingle nails, 4,900 subflooring nails and 2,600 finished flooring nails.

Most of these thousands of nails are still driven the way nails were driven 200 years ago, mostly because power nailers now available are too heavy. How could a carpenter hold a 200-lb. nailer against the studs to attach the building paper, or haul a 200-lb. nailer up to the roof to attach the sheathing?

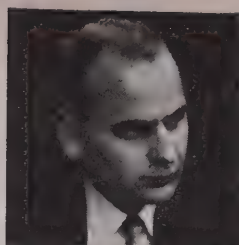
Lack of a light weight power nailer can only stimulate the home building industry to more and more interest in adhesives as a substitute for nails. Some increased use of adhesives is probably inevitable as better adhesives and better spreaders are developed—including, specifically, a power spreader that will work on vertical

surfaces—for adhesives offer the inherent advantage of making better use of the strength of wood (for example, much less lumber is needed for a glued truss than for a nailed or bolted truss). But with a good power nailer there is no good reason nails should lose out for attaching building paper, shingles, sheathing, and many other items.

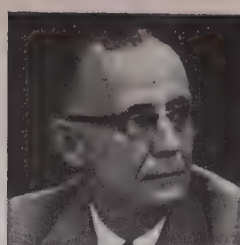
Perhaps the most intriguing new fastener now on the market is a power-actuated tool for driving bolts to tie the frame to the foundation. We believe this would be more widely used if it could fire six or eight cartridges without reloading, even though this might increase its first cost from \$125 to \$200. It would also be more widely used if builders were made to understand how safe and foolproof it has now been made. Its purpose is not just to save time in fastening, but to end the need of setting bolts in the slab and so makes the slab much easier to finish.



Clarke: Perhaps we have neglected the home building field.



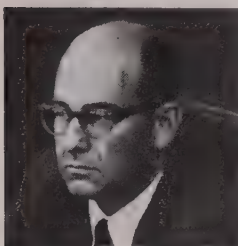
Patulski: The builder buys to save money.



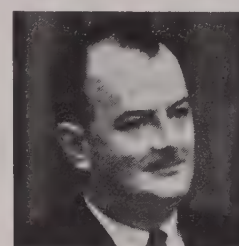
Cross: The investment in power tools must pay off.



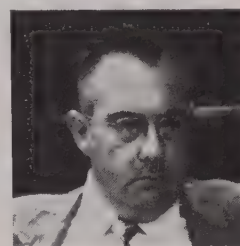
Horner: We must show the builder a saving.



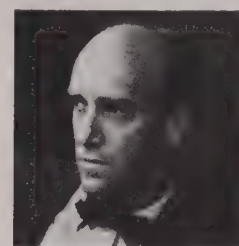
Goldman: If I were selling power tools I would demonstrate them on the job.



Highland: Architects and builders both want competent technical advice on how to save money with power tools.



Johnson: You will sell more tools if you get out on the site and do some cost engineering for the builder.



Weist: We don't pay consumer prices for anything.

Here are five ways to encourage better use of cost-cutting tools

The economies offered by power tools are so important to the progress and prosperity of our industry that the customers among us would like to help the manufacturers stimulate their use. The manufacturers tell us they serve so many other industries that they often find it hard to give home building special study, and some of them have asked our advice on how to increase their sales. Here are our suggestions:

1. The most important man to sell on tools for use at the site is the merchant builder, even though he is seldom the man who should actually buy tools (see page 139). The reason the merchant builder is so important is that he has the greatest stake in getting costs down.

2. The best places to sell more bench tools are the lumber yard, the prefabricator's factory, and the volume builder's cutting shed, for that is where more efficient and more expensive equipment can be kept busiest. The more hours the tools are used, the more profitable they become and

the better satisfied the owner. Builders of less than 50 houses can seldom keep any bench tool other than a radial saw busy enough to be profitable; builders of less than 25 houses, never.

The lumber dealer is important in every stage of mechanization. He is just about the best prospect for bench power tools. He is the logical outlet to sell portable tools to builders and subcontractors. He is providing most of the drive for mechanized material handling from mill to site.

3. The best way to increase the sale of power tools is to increase their use. This means educating more people who can influence power tools use on how to save money by using them. It means educating not only the carpenter, but the builder, the architect, even the lender (the prefabricator knows already). Until they understand what each tool can do to cut costs on the jobs they sponsor, design or finance, there is not much use telling them a competitive story about your tool being stronger, faster, lighter, or cheaper than some competing

tool of whose function and value they are likewise uninformed.

4. The best way to make a sale is to show the prospect right where he works how the tool or equipment would save him time and money. The salesman knows what his product can do, and as he watches the prospect's operation he can see and demonstrate many uses and savings the prospect cannot be expected to see for himself.

This closer contact would also help the manufacturers by giving them a much better understanding of what the builder needs and how the builder thinks. Too many manufacturers have told us frankly they sell their tools to dealers and do not know who buys them from the dealers or how they are used.

5. Power tools need servicing. If the manufacturers will tie servicing in with their sales, they will have less trouble with building professionals over price and discounts. Incidentally, the servicing will help them sell more buyers a second tool.



Penote: The foundation should be power-cut accurately.



Jay: A ladder machine will dig foundations with square corners.



Price: We recommend that all our builders own a generator and an electric drill.

The second installment of this Round Table report will be published next month. It details the problems and opportunities of cheaper materials handling at the mill, on the railroad, at the lumber yard, on the highway, and at the site.



Wall refrigerator, used as a room divider to separate kitchen from eating area is a new idea. It also provides counter space with two-way shelves. Oven and burner top shown below are at far end of masonry wall seen in large photo (left). This is one of eight new GE kitchens, each having several different coordinated color schemes.



KITCHENS GET EXCITING NEW LOOK

When you redesign the kitchen of your next model house, show your buyers how they can personalize it, as the General Electric Co. has done in a series of completely decorated new kitchens shown this month to builders and dealers in Louisville, Ky.



Family room kitchen has work counter, sit-down sink, copper hood.



Refrigerator-freezer stands free, has counter, storage, close to stove.



Pegboard panel, on back of refrigerator, provides place for decoration.



Western ranch kitchen uses two contrasting colors, woodtone brown and turquoise green in appliances and decorations that demonstrate how a builder or designer can successfully use more than one color. Designed for informal living this kitchen has stone floor, masonry wall with fireplace. Easy chairs create a pleasant effect. Merchandising ideas like these from General Electric help sell houses.



Garden City, 600 acres in suburban Pittsburgh, offers pattern for successful community planning

GOOD LAND PLANNING CREATES



Street layout follows natural lines of terrain, saves trees

Pittsburgh's new Garden City shows how land planning is a key to good public relations.

With an ultimate goal of 1,500 houses, Garden City is bigger than most projects. Big, too, is the sponsoring organization, a veteran building team brought together by four brothers named Sampson and a fifth partner, Russell T. Miller.

But mere size does not make Garden City newsworthy. What does is the way Sampson-Miller cast off practices still followed by many others.

- Where many builders bulldoze their way through the terrain, spoiling natural contours and knocking out trees, *Sampson-Miller worked with nature, planned streets to follow terrain, saved trees and created a green-belt around three sides of the property.*
- Where many builders let someone else worry about schools, churches, recreation areas, *Sampson-Miller made generous provision for community facilities.*



Site plan was dictated by desire to create an attractive background for family living. Large red area of contour plan, left, is community center; blue indicates proposed row houses. No thoroughfare cuts across the property. Instead, a 60' street (paved 34')—shown in photo; above, and indicated by heavy line in plan—loops around entire project and comes within 1/4 mile of furthest house. Other streets, paved 24', have T-shaped safety intersections. Long blocks reduce need for cross streets, paving and manholes, cost 8% less than gridiron scheme. Builders put in 15 miles of paved streets, 23 miles of gas lines, 30 miles of sewers, invested \$2.5 million. Each house is sited to its own 60' to 70' lot and sells for \$12,500 to \$22,500. Greenbelt encloses three sides of property.

Robert E. Dick



Planning team includes builders, architect, engineer, land planner and sales manager

GOOD WILL AND ATTRACTS BUYERS

• Where many builders pay little heed to the future appearance or livability of the neighborhood, *Samson-Miller planned for tomorrow as well as for today.*

Every builder needs the good will of local townspeople. Without it he must sledgehammer his way through opposition to his project and perhaps spend huge sums in advertising just to overcome a poor initial impression. Former NAHB president Dick Hughes says, "One of the home builder's biggest problems is that he's not wanted in most towns."

Where many builders encounter hostility from the towns they want to build in, Sampson-Miller enjoys active good will. **Difference in attitude toward land planning explains why the public welcomes one builder and shuns another.**

Sampson-Miller's formula is no product of beginner's luck. Pittsburgh's largest builder, the firm has behind it experience gained in building 5,000 houses since 1916.

How can smaller builders profit by Sampson-Miller's example? Features like Garden City's cannot be contained in a tract of 25, 50 or 100 houses. To follow this pattern, small builders would need cooperative land purchase and development. But any builder, regardless of size, can make better use of his land if he adopts Sampson-Miller's *attitude* towards planning.

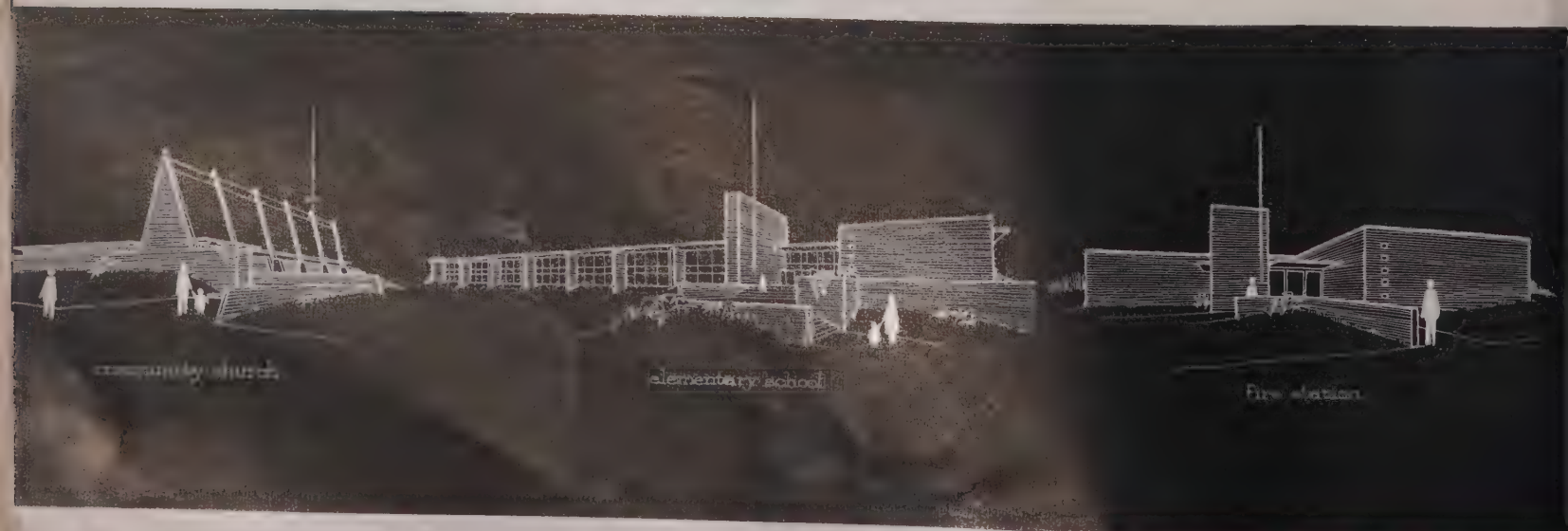
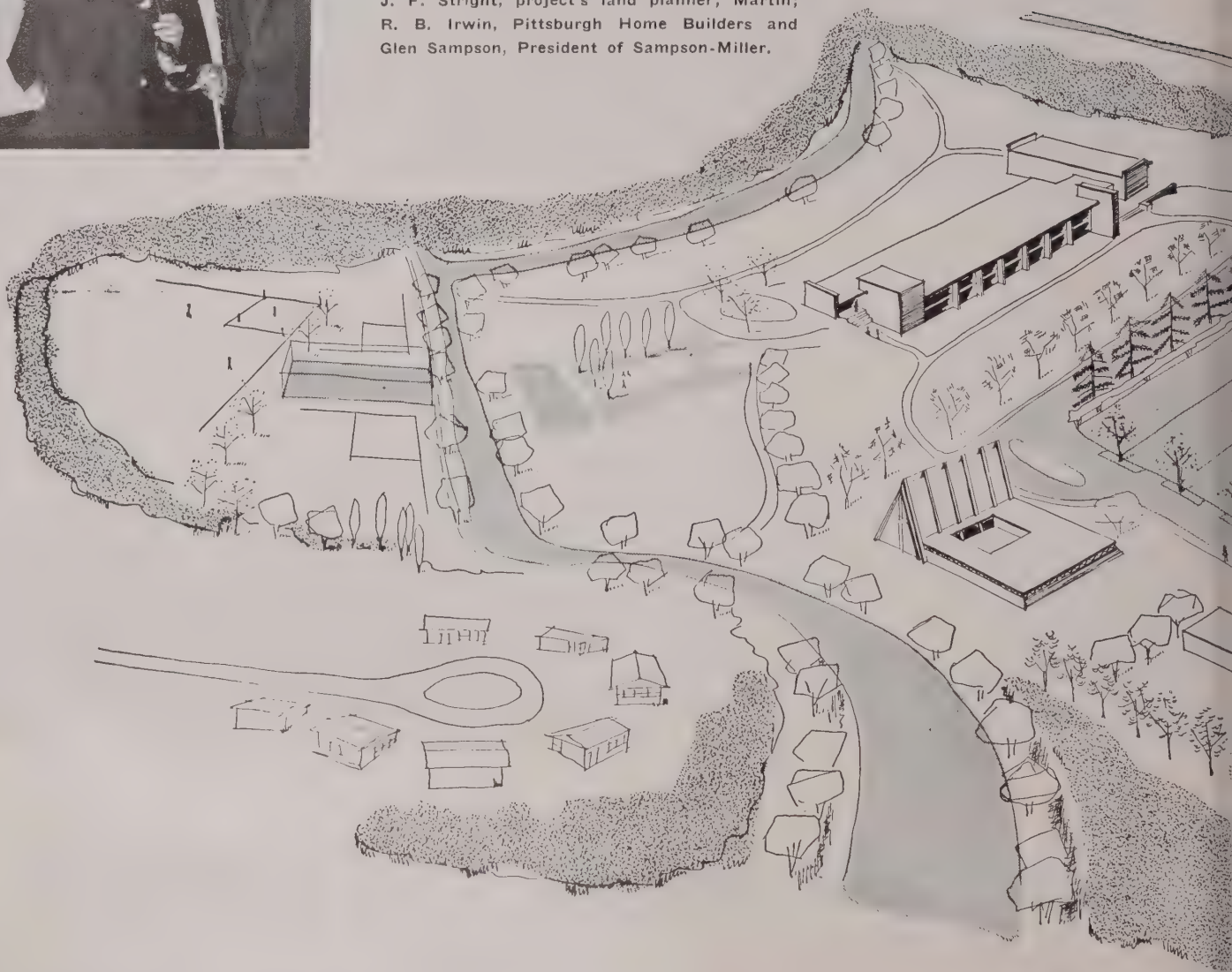
Chief reason for Garden City's fine streets and excellent facilities is the builder's recognition of the importance of land planning and the employment of a professional planner.

He is Jennings F. Stright, once Pittsburgh's city planner. Sampson-Miller's planning costs for Garden City were \$20 more per lot than for earlier projects.

Today when some builders find sales slow, business at Garden City is good. And when money is hard to borrow, Garden City's mortgages are being bought by Pittsburgh's Mellon National Bank, a lender which never before handled big tract financing.

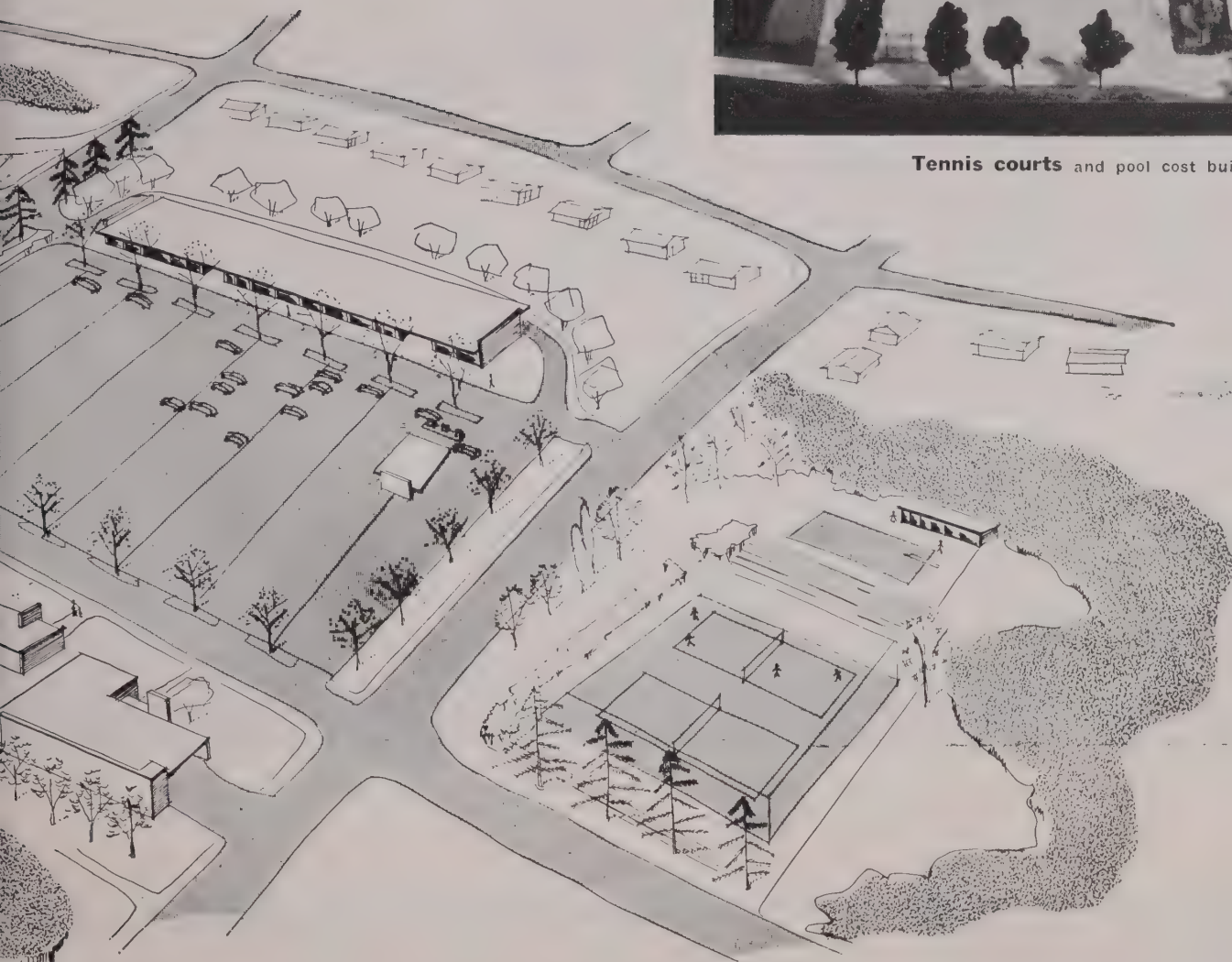
Robert E. Dick

Motion picture film, being examined by Park Martin, President of American Society of Planning Officials, tells story of Garden City's planning. Picture shows entire project in scale model, with close-ups of community features. Film, presented to more than 50 civic groups, helped builder win local cooperation by showing character of new community and telling how Sampson-Miller would assist on schools, water and sewers. In picture, left to right are: F. B. Wimer, Pittsburgh Home Builders President; J. F. Stright, project's land planner; Martin; R. B. Irwin, Pittsburgh Home Builders and Glen Sampson, President of Sampson-Miller.





Tennis courts and pool cost builders \$75,000



Civic center is Garden City's great drawing card

This well-planned community center is the heart of Garden City and its greatest single attraction.

Center includes an elementary school, community building, church, fire station, medical office building, shopping center, swimming pool, tennis courts and other recreation areas, plus facilities for parking. A second school and more playgrounds will be added later.

Woods and sloping ground separate the center from houses. No school bus is needed because every house is within walking distance of a school. Plan gives children direct access to school and playgrounds without entering shopping center area. Trucks going to the stores pass no homes.

Sites for schools and fire station were sold to community for the cost of the land improvements. Samp-

son-Miller is contributing the land for community church, is spending \$75,000 for a swimming pool and tennis courts, and is providing other recreation areas at its own expense.

Neighborhood shopping center is a 50,000 sq. ft. building which Sampson-Miller will sell outright to its tenants. In planning for stores at Garden City no attempt was made to create competition to huge shopping center southeast of the property.

Other community facilities donated to the town by the builder are: a \$250,000 sewage plant, \$600,000 worth of sewer lines and \$255,000 worth of storm sewers.

Because the local water supply was inadequate, Sampson-Miller agreed to buy water from a new water authority and helped get bond issue approved.



Sales models benefit from painstaking attention: strategic placement, handsome landscaping and an effective backdrop of fencing

Merchandising at Garden City is



Sales office (above) is located to the immediate left of model houses shown in center spread. An important part of Sampson-Miller's merchandising plan, sales office looks substantial and professional, lends dignity to the sales force. Formerly, when sales offices were in basement of model house, business was concentrated in week-end period. Now, buyers come in every day and salesmen can make better use of their time. Right: one of main entrances to the Garden City property.





on a par with excellence of builder's planning

To sell Garden City's houses, Sampson-Miller leaves nothing to chance.

Model houses dominate a hillside where they can be seen from main highway. They are expertly landscaped and flood-lighted at night. Display is supported by handsome sales office.

Garden City's sales headquarters is located off the main property but just across the street from it and right next door to a large and much-visited suburban shopping center. As great care was taken in furnishing the models (see next page) as in making the exteriors attractive.

Models were designed to feature ideas which Pittsburgh buyers favor. Brick construction has strong appeal in this area where smoke used to be a hazard for painted wood siding. Garden City's models also show a new trend toward considerably more redwood trim.

Customer research reveals that the development's No. 1 appeal to home buyers is its over-all community character. So the sales office is used to display a scale model of the neighborhood center, sketches of swimming pool and community buildings.

About 300 houses have been sold since late last spring and sales continue well ahead of construction. The firm figures selling costs for 1956 will be lowest in its history because "nearly everyone in Pittsburgh now knows what Garden City has to offer."

But merchandising does not stop with the sale. Sampson-Miller works to keep the buyer sold.

A home planning director calls on new families, offers free advice on colors and furnishings. An inspector makes a moving-day check, calls back 30 days later and again in six months. Interest taken in buyers reduces complaints and adds good will.

Hillside houses fit terrain, are typical of Garden City

Because there is almost no level land in Pittsburgh, both builders and the public have learned to like hillside houses.

Unlike California builders who carve flat lots out of rough terrain, Sampson-Miller makes a partial excavation to get a lower floor. House buyers argue strongly over the merits of the high side of the street versus the low side, but fortunately for Garden City, the public seems evenly divided.

The house shown at right is on the high side, has its garage entrance at front. But this same house is also built on the low side of street with a driveway extending to rear garage. This gives the builder two variations for each model.

Architect Richard Benn designed these Garden City houses as improved versions of earlier Sampson-Miller models. Interior plans are more nearly open than they used to be and wood paneling and interior brick walls are popular. Other sales features include: termite capped foundation, full insulation, truss roofs, copper plumbing, hardwood floors, steel casement windows, sliding closet doors, 220 v. wiring, ample electrical outlets and exhaust fans in bath as well as kitchen.

In addition to Sampson-Miller's own models, other builders will put up several groups of custom-designed houses in Garden City to sell at prices from \$20,000 to \$30,000.

Sampson-Miller has also set aside 20 acres near the Civic Center which may be used for row houses if the market seems suitable later this year. The firm would like to include rental units to help diversify the population. But with prices from \$12,500 to \$30,000, Garden City already gets more variation than most developments.

Landscaped models give buyers do-it-yourself ideas

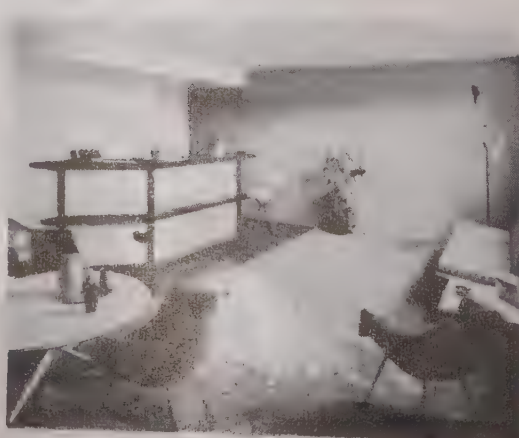


Second best seller is \$15,800, has three bedrooms

Fireplace, brick walls are buyer favorites



Recreation room is popular option



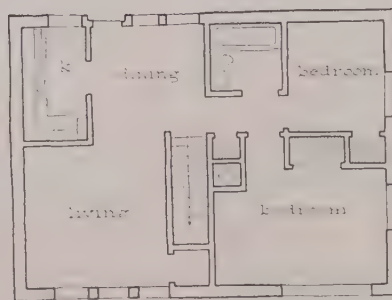
Wood paneling is well liked





All-brick house with panelized windows is Garden City leader

Best seller at Garden City is hillside house (above) which sells for \$13,990 with lower floor finished as a family room (or third bedroom) and a half bath, plus garage and utility room. It is 33'4" x 24'8". House costs \$625 less with lower floor unfinished, but few buy it that way. A larger version is 48' x 27', has three bedrooms upstairs, large all-purpose room and powder room below, plus two-car garage. It sells for \$22,500 / END



upper level



lower level

0 5 10 15 ft

Dining ell adds space to living room



Sliding glass cabinet doors are attraction



Photos: Marc Neuhoj;

Robert E. Dick

Arthur A. Preston

6 MORE WAYS

These six suggestions were prepared in collaboration with James T. Lendrum, AIA Director, Small Homes Council



Built-up member for window frame effects substantial savings where large glass areas are used

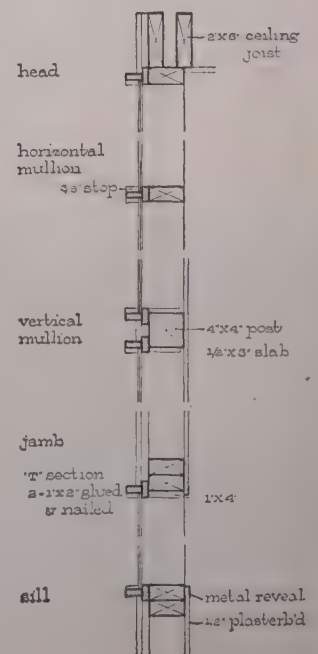
50 Built-up member simplifies window frame

Use of large areas of fixed glass, especially in gable-end windows and other locations where unusual sizes or shapes are required, complicates the problem of getting adequate window frames and increases their cost.

To meet this problem Architect Seth M. Fuller of Seattle, Wash., has developed, for builder E. B. Vaughters, a built-up member which can be used in a great variety of locations. The built-up member is basically a T-shaped section made up of two 1" x 2" members glued and nailed. Waterproof glue, of course, is used throughout. The built-up member is cheaper than the same size piece cut from a solid, and Vaughters reports he gets better finish and better quality lumber than

he would if the section were milled. The special section is used either as a jamb or a head section and with slight modification it can also be used as a sill. Vaughters reports:

"It coordinates with the framing, is flexible, and works with all types of sizes and openings. It is watertight, looks well, and even in our competitive market we use it in homes of all price ranges. It is the best we've seen yet from a cost standpoint, but it would be rather difficult to say just how much we save per house with this member. Perhaps it would be safer to say we couldn't build this house unless we had a flexible, economical, window detail like this."



TO BUILD BETTER FOR LESS



One-room technique adaptation eliminates wall step

51 Modified “one-room” system

John Blanchon of Olathe, Kan. has modified the one-room technique for home building (No. 44 of “Ways to Build Better for Less,” H&H, Aug. '55) to achieve additional savings in cost.

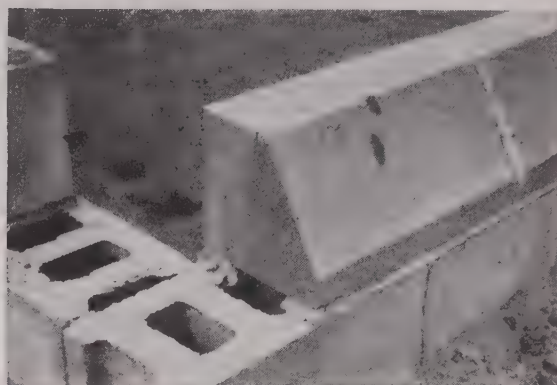
Blanchon points out that the standard one-room technique frequently requires: 1) additional FHA inspections to check the outside wall framing before dry-wall is applied and before the regular inspection of framing on interior partitions; 2) an extra trip for the electrician to rough in wiring on interior partitions.

Blanchon reports he avoids these delays this way: “I can make the greatest savings by installing the dry-wall over the entire ceiling and laying oak floor over the entire floor area of the house.”

Under the Blanchon system, the dry-wall is installed on the ceiling, the finish floor is installed next, then all interior partitions put in place. The result: one FHA inspection instead of two; the electrician can rough in the entire house at one time.

Blanchon believes the cost of an extra inspection about equals any loss he might have from not installing dry-wall over all of the exterior walls before setting partitions. The net savings, therefore, are in avoiding: 1) the loss of time which results from waiting for an inspection and 2) the electrician's extra work.

Although Builder Blanchon has not tried it, it is quite possible to plaster the entire ceiling, then install the floor and partitions. This additional modification would be helpful in areas where it is difficult to get a good dry-wall taping job, particularly on ceilings, or when a “shell house” is being built.



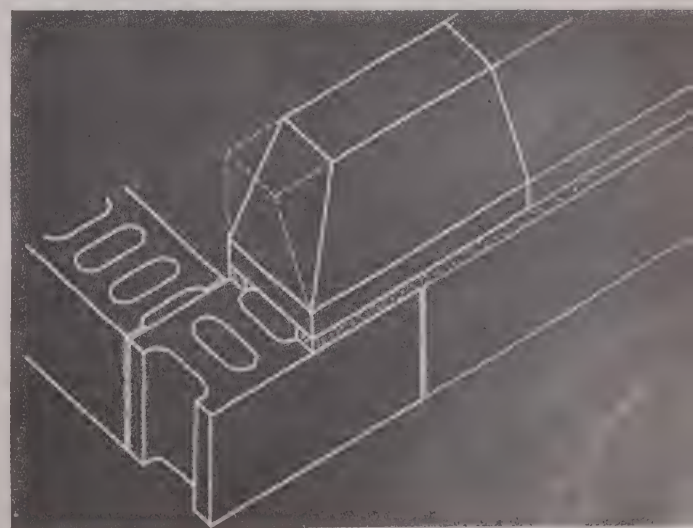
Concrete slab foundation detail saves form cost

52 Special concrete block simplifies foundation

Jerry Henry of Frank J. Henry Inc., Wisconsin Rapids, Wis., uses a special concrete block as a cap to his concrete masonry rim wall foundation. He reports: “In 1952 we used a special foundation block very similar to one of the details suggested in the BRAB report to FHA (H&H, Sept. '55). The block makes it easy to install insulation, by doing away with the awkward spot on the interior where the insulation is exposed and, of course, it eliminates the necessity for pouring a cap block in place.

A local plant made our blocks for us, and they cost only a few cents more than regular ones. At the exterior corners, we cut the block with a saw (see drawing), and on interior corners we coped the blocks. Finish job is neat, savings over a poured-in-place beam are about 25¢ to 30¢ per ft.”

Saw trims concrete block at exterior corners

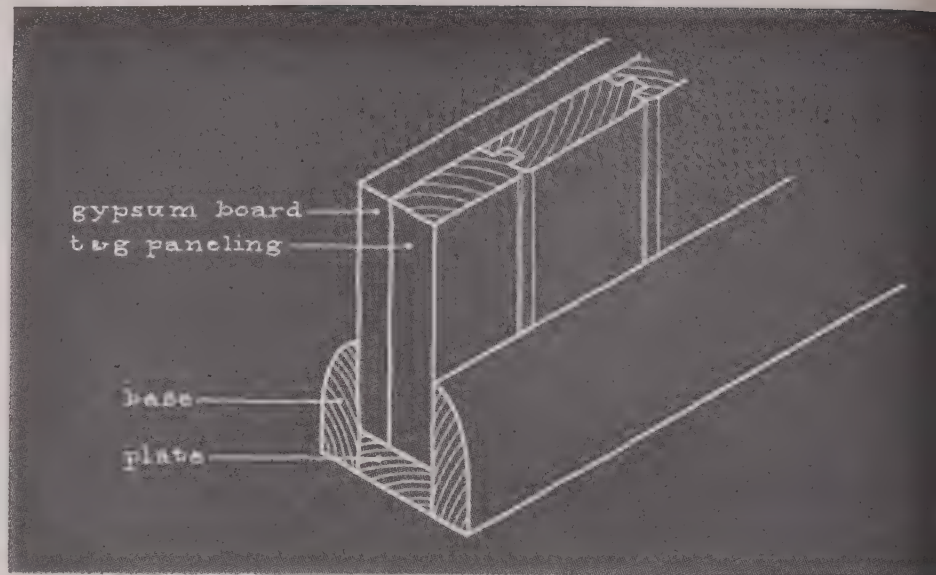


Studless wall saves space and money

You can use a studless wall with an overall thickness of about $1\frac{1}{4}$ " for partitions, like those between adjacent bedrooms.

The combination is $\frac{1}{2}$ " gypsum dry-wall, together with $\frac{3}{4}$ " T & G wood paneling installed vertically. The wall effects a saving in space of $3\frac{5}{8}$ " and eliminates the cost of the studs. The wallboard may be nailed to the wood paneling, or you can use an adhesive. Using adhesive will help reduce cost by simplifying the job of spotting nailheads.

A series of tests of this type of wall were made as part of a Small Homes Council project carried out by William H. Kapple and Walter H. Lewis and it proved to be entirely satisfactory for impact as well as uniform load. Sound transmission qualities are not better but not much worse than for an ordinary stud partition. Thin-wall studless panels are engineered for the purpose they serve—enclosure walls rather than load-bearing.



Thin, studless wall is a practical interior partition

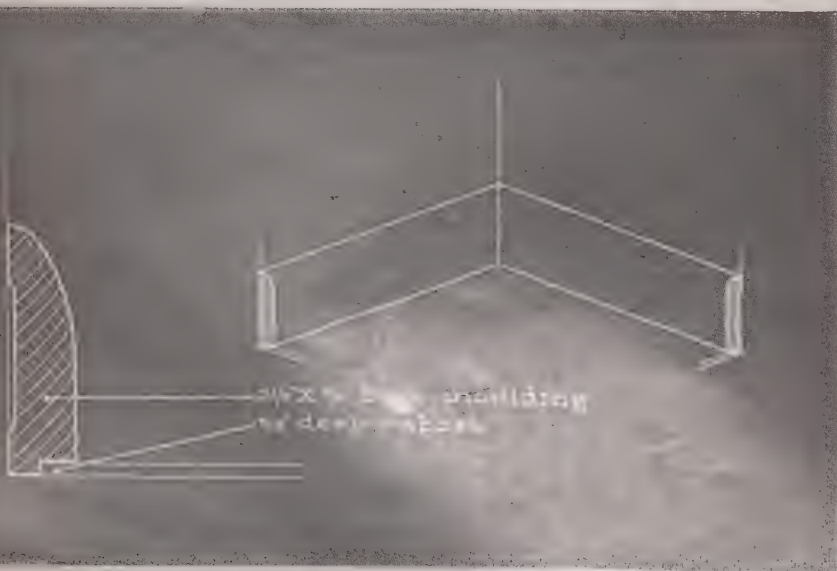
Base detail

saves carpenters a trip

"A slight change in the profile of a base eliminates the need for a return trip by the carpenters," says Lanford Keith of Roswell, N. M.

When asphalt tile is the finish flooring a common procedure is to have the carpenters fit the base, but not install it until after the asphalt tile has been laid. This means a return trip for the carpenters and often, additional painting as well. By cutting a rabbet in the bottom of the one-piece base as shown in the drawing, the base can be installed along with the rest of the trim.

The floor layers slip the tile under the base and get a better job than they would if they attempted to scribe the tile to an already installed mold. Both the carpenters and the floor layers like the detail, and Keith reports the savings on eliminating return trip for the carpenters runs at least \$10 to \$15 a house, depending on the size of the structure.



Rabbet on baseboard accommodates finish flooring

Rack simplifies handling trusses and gable ends

Material handling amounts to a surprisingly high percentage of the total cost of construction. Some builders at H&H's Round Table estimated it runs from 25 to 40% of the sales price of a house.

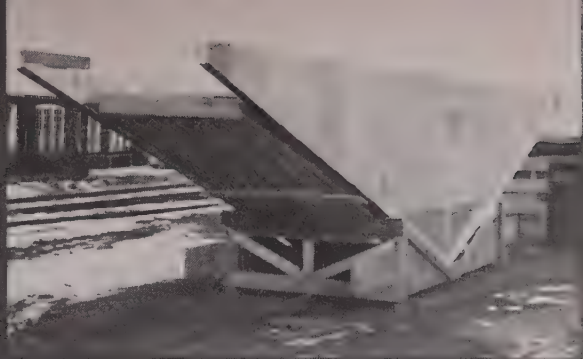
To reduce some of this expense, David Squires, manager and material handling expert of Thompson Lumber Co., Champaign, Ill., has developed a very simple rack or cradle which he uses in the delivery of roof trusses and gable ends to a project being built by Dean Evans, of Champaign.

When the truss is finished in the jig, it is set directly into the cradle and never handled again by manpower until it is ready to be lifted onto the side walls of the house. The rack, with two gable ends and enough trusses for one house, is loaded onto a dump truck with a fork lift. At the site, the complete package is dumped and is ready for the erection crew. Occasionally, a regular roller bed lumber truck is used and the operation is satisfactory with either type equipment.

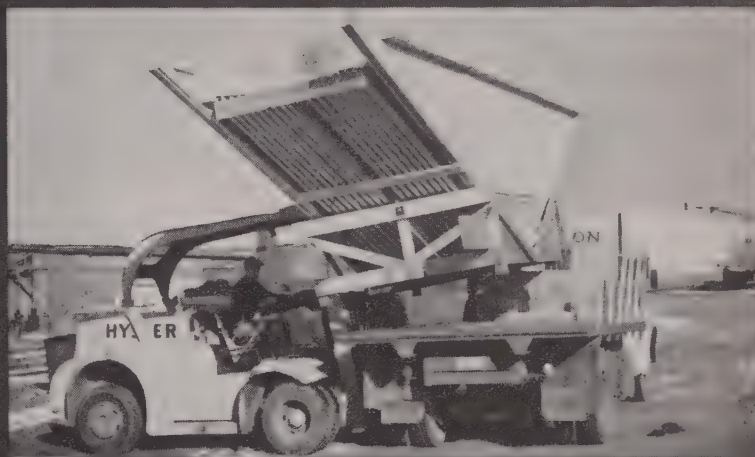
The rack supports the trusses in the proper position—they are weakest when turned horizontally or flat and the joints could be damaged by rough handling. It also holds the gable ends so they may be primed by the painter at the job before they are set in place on the walls.

The trusses and gable ends are not strapped to the cradle. The only fastening is a simple scrap of wood laid across the top and attached to the gable ends.

Dave Squires reports they have not determined the actual dollar savings that result from use of the rack, but there are five ways in which they save: 1) storage at the yard where the trusses are fabricated; 2) truck loading at the yard; 3) truck unloading at the site; 4) painting and storage at the site; 5) simplified handling by the erection crew.



Trusses and gable ends are set directly in cradle



Fork lift loads truck that delivers entire package



Trusses and ends are held securely for priming



Fences



Modern panels divide lots



Redwood bark makes textured design



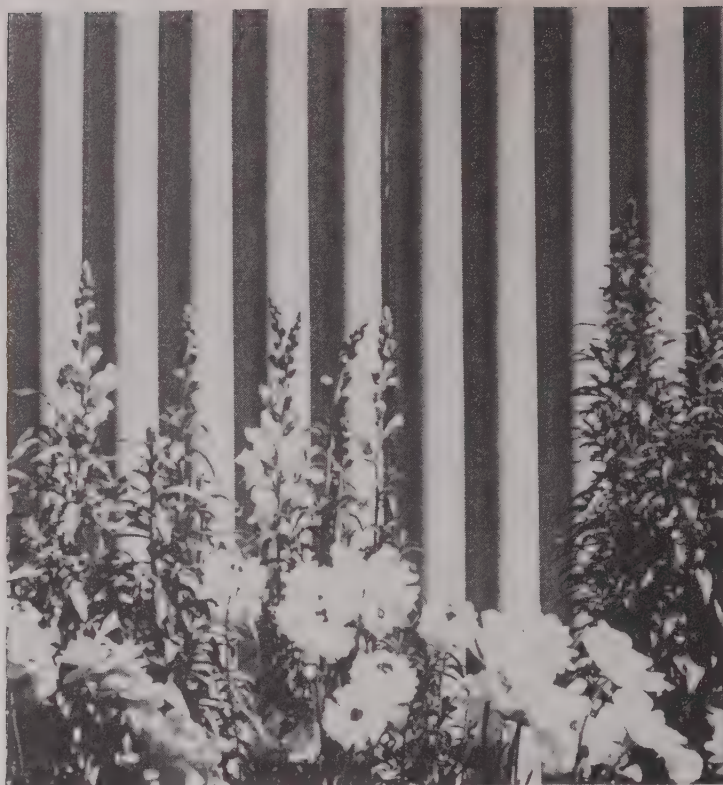
Shadow heightens egg-crate pattern



Battens, paint create open feeling



Wood panes set off garden effects



Corrugated asbestos has elements of good fence: texture, shadow, concealment

New ways to

HELP THE LOT SELL THE HOUSE

Ingenious landscaping can save you money while it helps sell houses. Ideas shown here, the work of Thomas D. Church, exemplify resourceful lot treatment that is high in buyer appeal.

Fences: an imaginatively-designed fence which gives privacy while it creates outdoor "rooms" can sell a small lot. Wire and wood are cheap, but you need to mix style with your 2 x 4s.

Decks: before you order fill or a bulldozer to push land around, try sidestepping a grading problem with a wooden deck that extends out from the house over the slope and gives the buyer a view and an easy-to-maintain terrace. Use a deck, too, when it's not possible to get level space by filling or by retaining walls.

Paving: a few extra yards of concrete will provide generous paved areas. This paving may cost far less than grass sod, is more useful because it serves as terrace area, is easier to care for than grass. Adding color, texture and pattern to the concrete will make it more attractive. Earth colors like buff, tan, brown and warm gray are safest. You can get texture variations by brooming the surface or exposing the aggregate. Wood, brick, tile or mosaic pebbles add pattern, act as expansion joints.

These practical ideas are from *Gardens are for People*, a book by famed landscape architect Thomas D. Church (published by Reinhold Publishing Co., \$10).



Broad decks capture view,
solve slope problems

Decks



Paving

Paving and fence create outdoor rooms, help owner use every inch of his lot. Right: perimeter is varied to prevent "boxed-in" feeling. Below: squares of redwood 2 x 4 headers separate broomed aggregate paving, give it decorative interest of an interior "floor."

Philip Fein





Martin Bartling and his newest, nearest all-component house (see pp. 166-167 for interior views and floor plan)

Small builder says:

BETTER HOUSES ARE EASY IF YOU USE

My first panelized houses went up smoother, faster and sold quicker than any other house I ever built," reports Martin Bartling of Knoxville, a small-volume builder since 1945.

Bartling's newest model, shown behind him in photo above, is an almost completely component-built house.

It is put together from bigger parts and fewer pieces than were used in any other of the 12,000 component-houses erected by builders since the Lumber Research Council first introduced its Lu-Re-Co panel and roof truss system in 1954. For Bartling does not limit himself to the components Lu-Re-Co makes available:

- He has adopted an integral decking-insulating-roofing material that requires only a tenth as many pieces as used in conventional roofing.
- His local lumber yard supplies him with preassembled gable ends and window walls made up of stock windows in tandem.
- He has developed a new interior partitioning system that makes walls and storage facilities out of flush panel doors combined with metal splines. (His Components Inc. of Knoxville will put the spine-panels and other components on the market early this year.)

A former chairman of NAHB's famed Trade Secrets Committee and now a trustee of the NAHB Research Institute, Bartling is no stranger to better building techniques. Says he: "Building with bigger and fewer parts is the most logical and economical way to simplify the entire home building operation: architects can provide more economical small-house design by selecting standardized parts from a catalogue; FHA can use basic parts as a pricing tool to determine valuations; builders can rearrange the parts to suit their local markets and their own individuality."

Photos: (top opp.) Geo. A. Padginton;
(bot. r.) courtesy L. A. Darling Co.;
(others) Paul Fogarty Studio

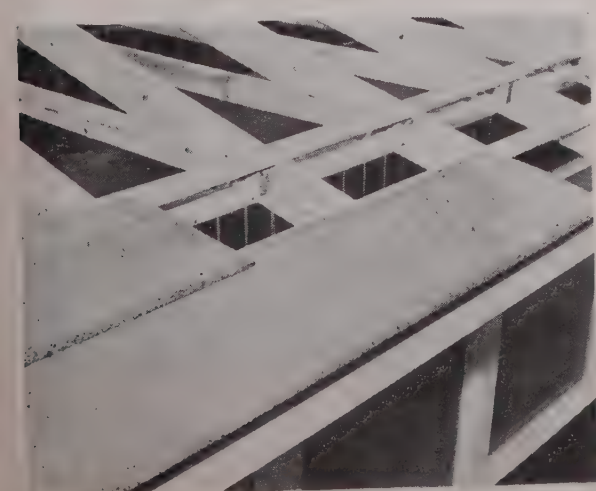


Lu-Re-Co panels (\$7.10 each), roof trusses (\$14.20 each), form major structure of Bartling's house

BIGGER AND FEWER PARTS



Gable end (\$45) is built in lumber yard



Shingle deck costs \$31 per square in place

For years builders have dreamed about building from components like these.

The ideal: to be able to select such parts from a building "catalogue" and put them together in a variety of ways to produce many kinds of houses.

The biggest obstacle: standard dimensions to enable these parts to fit together on site easily and accurately.

Lack of dimensionally standardized parts (e.g.: windows sized to stud spacing) has retarded the component approach to building. But in the last two years great progress has been made:

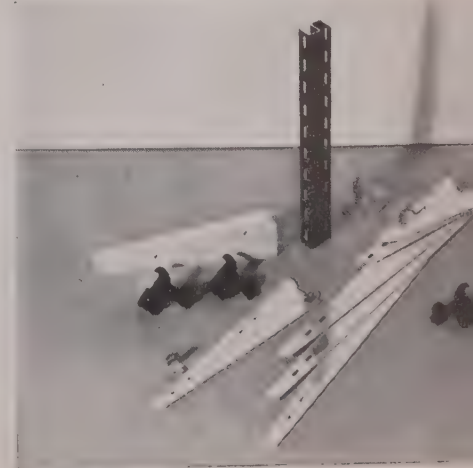
- The Lumber Dealers Research Council has promoted preassembly of modular 4' x 8' wall panels.
- Window manufacturers have created new window sizes to fit the panels.
- FHA approved 2' o.c. stud spacing that makes 2' o.c. truss roof framing practical and economical.

Meanwhile, dimensionally standard sheet materials virtually made the 8' ceiling height universal and gable ends and window walls became increasingly available.

Now Bartling's new interior partition system, based on 2'-wide flush wood panels, fits into the standard scheme.



Flush panel partitions cost 45¢ per sq. ft.



Splines for hardware cost 25¢ per lin. ft.

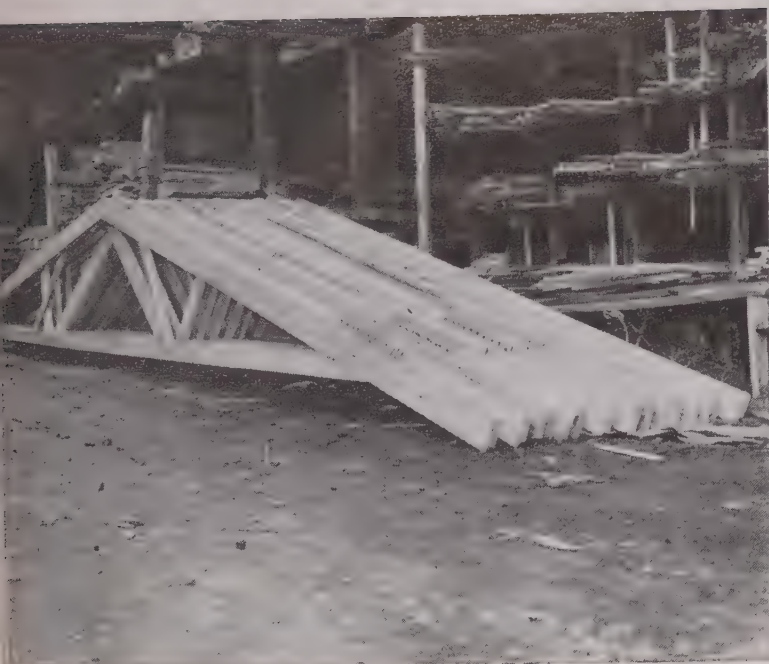


Photo: (above, opp. & bot. r.) Paul A. Fogarty Studio



Armor-cel roof system shown in drawing above combines structural roof deck, insulation, felt and roof covering in one unit. Locking and center wood strips add strength. As shown in photo (right) units overlap and are nailed twice per truss. When assembled, units expose 13" to weather on pitches 3 in 12 or higher and 1/2" shadow line at interlock. Using power saw to cut, three-man crew can lay 15 squares per day. Bartling says insulating value of product is much superior to conventional roofing.



Photos: (above) courtesy Armor-Cel Corp.

Trusses (left) are valuable chiefly, says Bartling, because they get you inside a house faster and let you do more: "The house becomes a big, open and uncluttered room in which ceilings, floors and outside walls can be finished in one unbroken sweep." Many truss designs are available through local lumber yards.

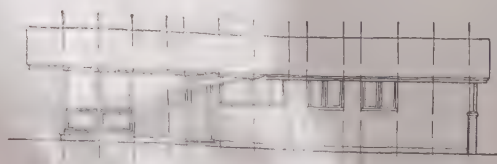
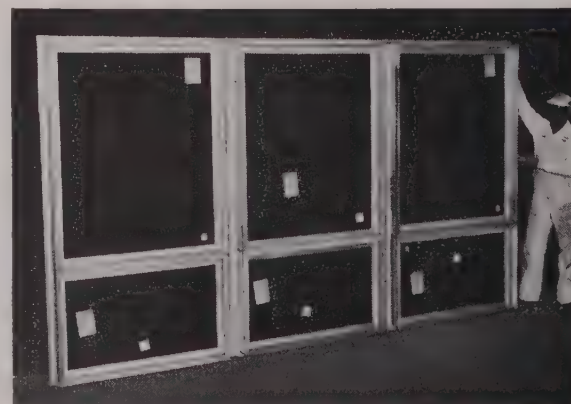
Using exterior components like these

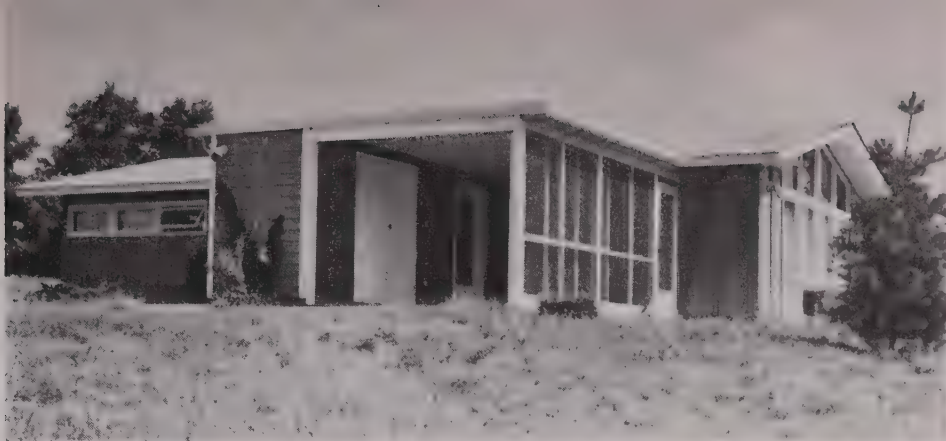


Prenailed panels (left) can be quickly joined together. Prenailing was suggested by Knoxville Lumber Dealer Stuart Fonde. Technique frees workmen to use both hands on the heavy panels without needing to reach in pocket for nails.

Bartling's fences (top right) are built by local lumber companies, Faragut or City Lumber. Bartling finds fences required for houses with large glass areas. Stock windows (bottom right) are joined in tandem to form window wall. Bartling pays lumber yards 50¢ per window for joining.

Working drawing of elevation (below) used instead of floor plans, prevents mistakes in putting paneled houses together. "It's easier to identify position of a panel from an elevation," says Bartling. Same drawings are used by lumber companies when they make up the panels.





Panelized houses look different even though built from same components. Reason: a change in exterior materials, fenestration and orientation.

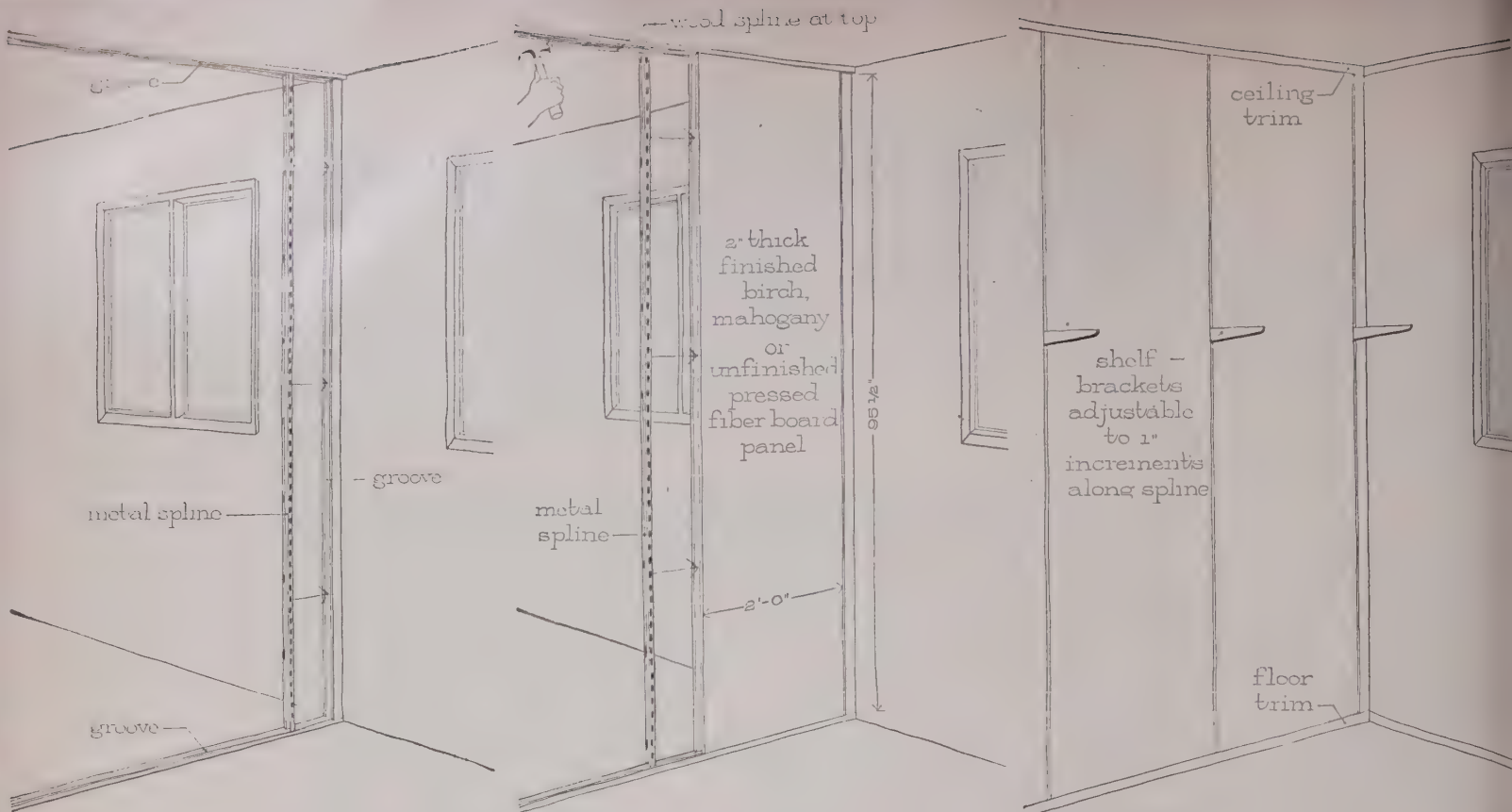


you can build many types of houses



Landscaped house (immediately above) identical in size and price with two houses shown above is different in appearance. Bartling's current 1,340 sq. ft. model (below) sells for \$18,000.





Grooved $\frac{3}{4}$ " x 2" runners are nailed to floor and ceiling. A 2" x 4" starter post, plumbed with shingles at wall, receives first metal spline for system.

Plywood panel is friction fitted to runners by wood splines. Panels are face nailed at joints where base, ceiling trim cover unfinished joints.

Shelf brackets are hooked into splines buried between panels. Two men can erect all partitions in day's time. Wiring is in panel's hollow core.

New interior components give complete flexibility

Here is the newest and most complete interior component system on the market.

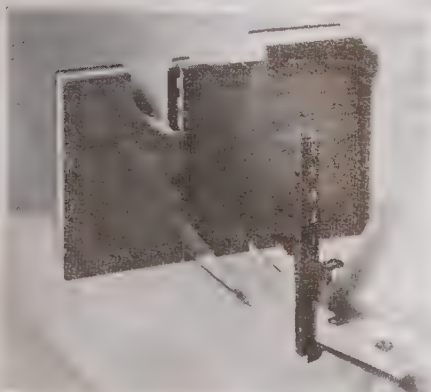
By combining hollow core wood panels and an S-shaped metal spline that locks the panels together, Martin Bartling has produced a lightweight, thin-wall interior partition system that can be used throughout a trussed-roof house.

"Component building has the speed, ease and cost control advantages of prefabrication without high freight costs," says Bartling who points out that enough interior partitions for nine houses can be loaded aboard one truck. (He buys heavy, bulky exterior components shown on pp. 162-3 from local lumber dealers.)

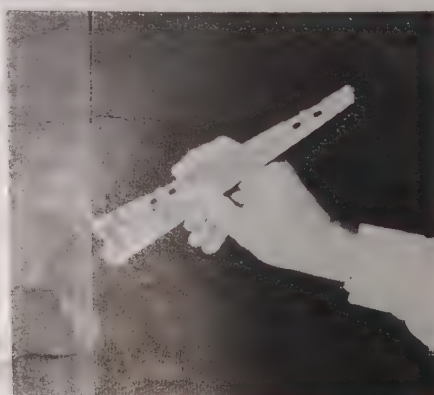
"With this interior component system," Bartling says, "any builder can customize the interior of his houses at minimum cost simply by using the spline-panel system for some walls and interior Lu-Re-Co panels for others that are to get a gypsum facing."

The dividends Bartling gets from use of the thin-wall panels throughout his new 1,340-sq. ft. house are the addition of 14 sq. ft. more interior space, plus conversion of each wall into a potential storage facility.

The dividend of component building as a whole, he believes, is a psychological one: "The finished house is the product of the builder's own individual skill."



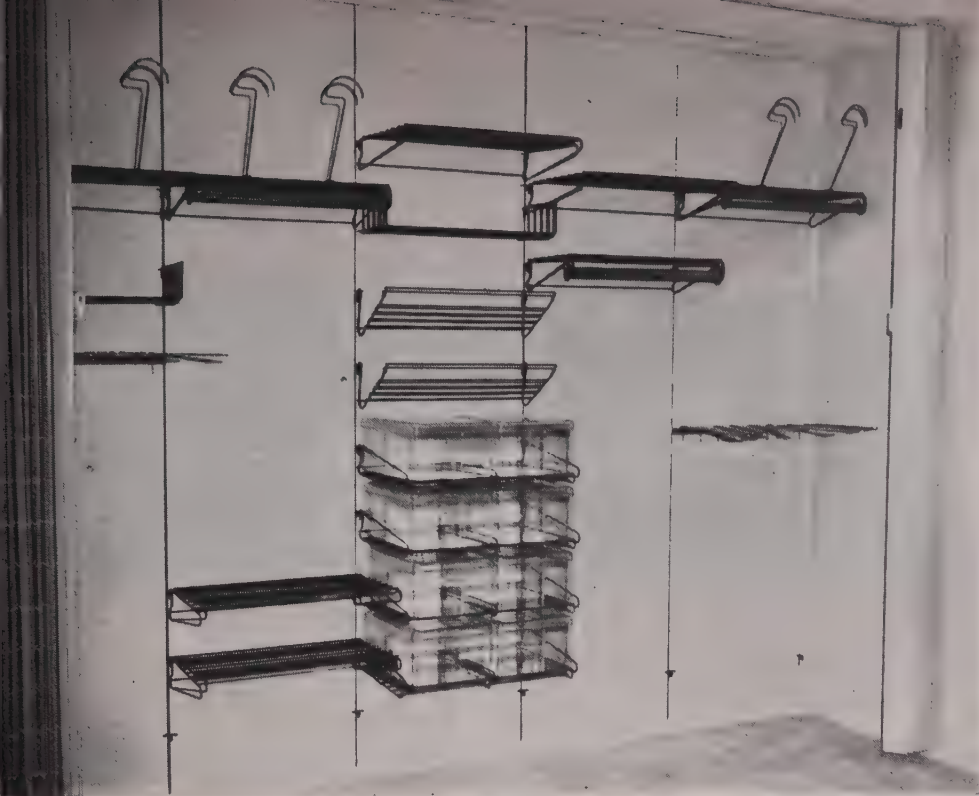
Cutaway: metal spline (foreground) is recessed into grooved flush panels (rear).



Shelf bracket is hooked to spline. There is no through joint to transmit sound.



Shelf clips fit bracket, can be screwed to shelf or rack.



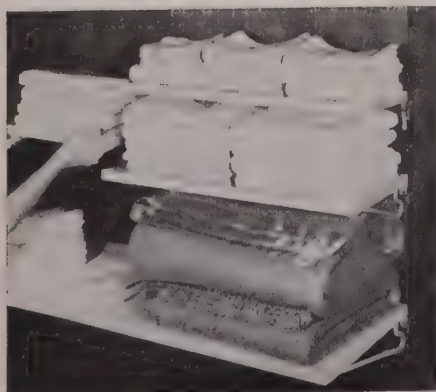
Partition wall of closet is made up entirely of 2"-thick, 2'-wide hollow core panels running from floor to ceiling and joined by metal splines. Storage hardware is inserted into splines anywhere along the length of the splines in 1" increments of height. Spline-panel system permits full-dimensional use of closet. As shown in lower photo, shelves and clothes poles at varied convenient heights waste no space since additional shelves or plastic drawers can be fitted above or below.



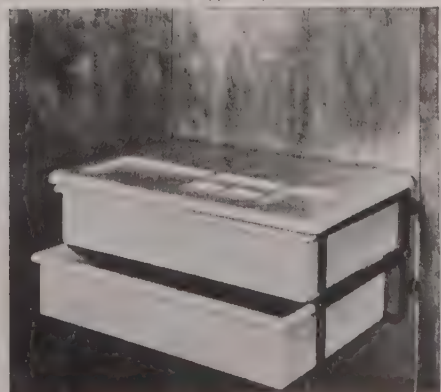
Patents applied for, L. A. Darling Co.



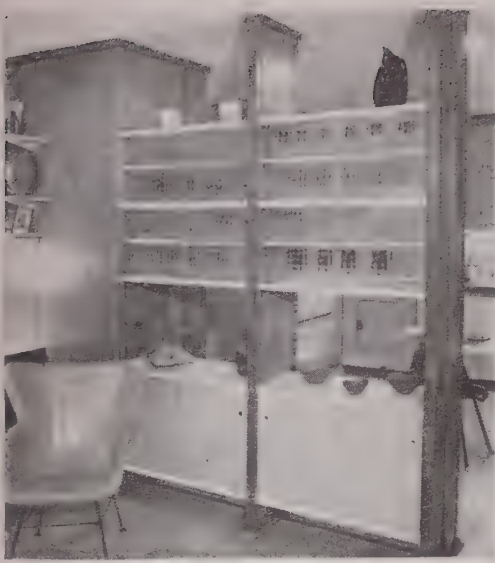
Wire shelf and clothes pole adjusts to any height.



Various depths of shelving are available to meet specific requirements.



Even drawers can be fitted to track hardware attached to metal splines.



China cabinet-pass through combination hangs from nonload-bearing partitions fitted with splines.



Sliding kitchen cabinet doors are hung from wall over built-in kitchen appliances, work surface.



Bathroom cabinet, towel bar and ring and shelf can easily be moved to convenient heights.

Spline panels, used in every room of Bartling's house,

Spline support system used on shelves above desk can support desk tops as shown in photo opposite.



Storage is the big selling feature of Martin Bartling's newest house (exterior shown on p. 160).

He has scotched the home buyer's most frequently heard complaint: lack of storage or storage in the wrong place. He has utilized every interior partition to make a closet, shelf, rack, cabinet or a piece of built-in furniture or equipment.

"I've had the same storage problems other builders have," says Bartling. "Because I've eliminated the basement and lowered the roof pitch over the attic my houses are short of traditional storage facilities. And yet people are buying more things than ever and need a place to put all these possessions. So I figured the one best way to give them back the storage they lost was to put it on the walls. The raves we got from people who toured our first model house proves we were right."

But did people object to the paneled look? "No one even mentioned it," says Bartling. "The only comments we got were on the convenience of storage. **The paneled look is not objectionable when it has a function** and the function was apparent everywhere people saw a shelf, hanger or built-in. If anything, we've undershot the market for built-in furniture. People expressed a desire for even more built-ins."

MARTIN BARTLING, builder
LOCATION: Knoxville, Tenn.
WILLIAM A. SLOAN JR., architect
JAMES CLEVELAND, decorator



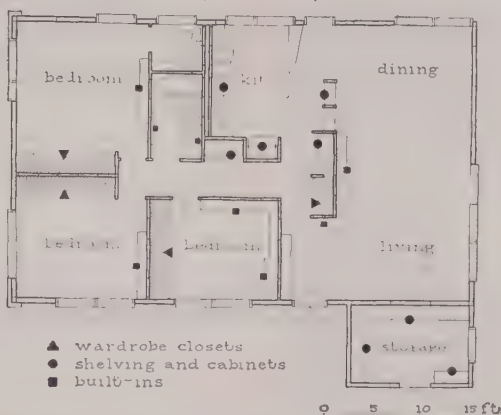
Biggest merchandising attraction of spline-panel system is fully storage-equipped bedroom closet.

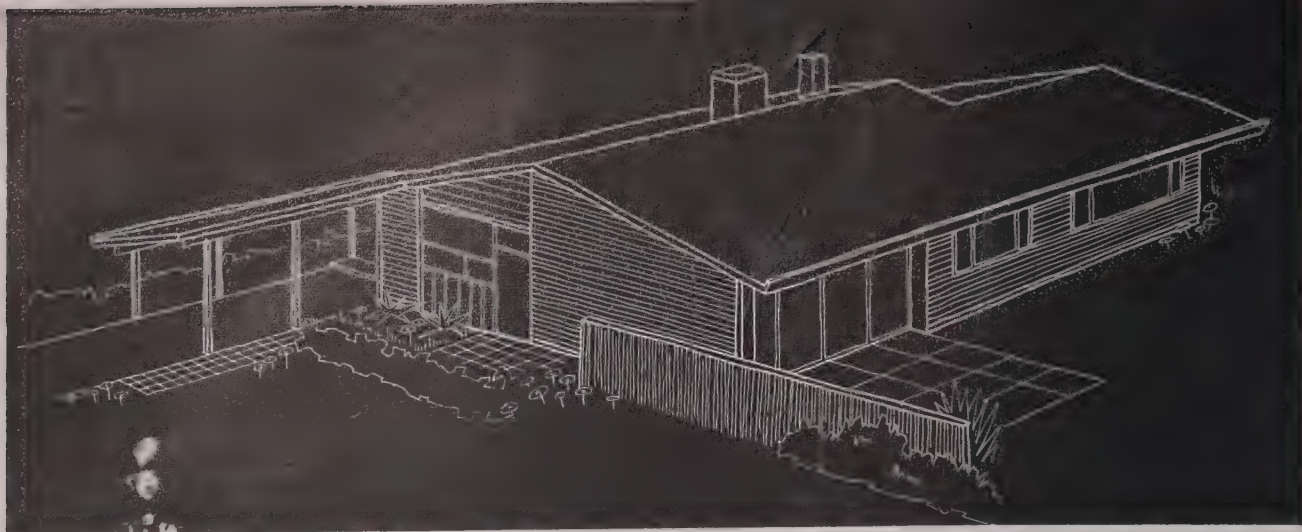


Conventional gypsum wall surrounds house perimeter; only interior partitions are of splines and panels.

put the walls to work

"Children's bedrooms can be merchandised if you use smart, new ideas," says Bartling. Here room is equipped for study, play, entertaining and storage.

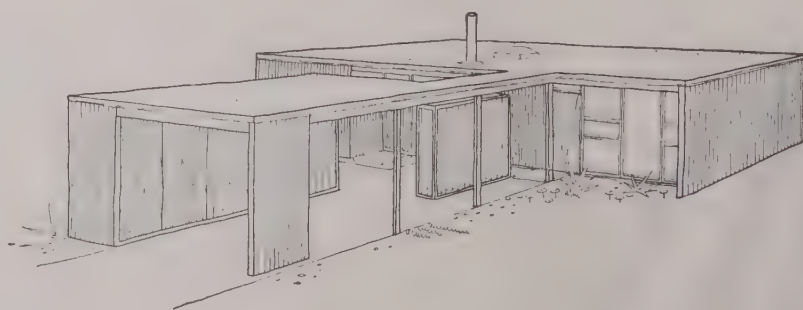
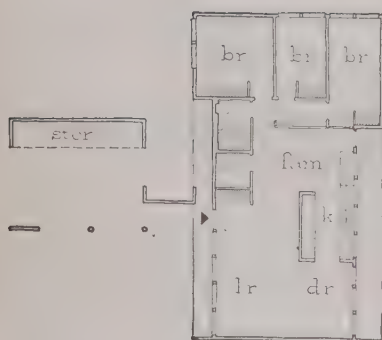




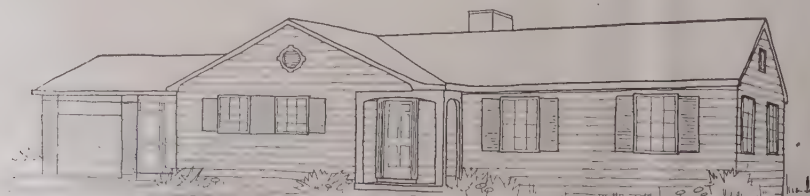
Ranch style house with single gable roof by L. Morgan Yost and L. Coder Taylor, architects and engineers, boasts two full baths, full-size family room and fireplace. Lumber Dealers Research Council hopes this house, and others shown here, will prompt architects to design more houses using Lu-Re-Co panels and a soon-to-be announced floor panel system.

THREE NEW COMPONENT HOUSES

To show how its Lu-Re-Co panel component system can be used to build houses in a variety of styles, the Lumber Dealers Research Council commissioned architects to design the three very different houses shown on this page. Lumber dealers who previously purchased Lu-Re-Co design and engineering kits get the new plans free.



Flat-roofed contemporary house by Architects George Fred Keck and William Keck has single bath, three bedrooms, family room and dining area flanking double in-line kitchen, no fireplace.



Early American design by Architect Bertram Weber has opposing roof gables, trades breezeway between house and garage for family room seen in other two houses.

15 "FAVORITE NEW PRODUCTS"

named by the men who use them

Below, and on the next three pages, you will find 15 products or processes. Each has been named by an architect or builder as the most important product idea he adopted during 1955. Any or all of them may apply directly to the needs of your home building operation.

Not all these items are brand new; some of them are new applications of familiar products. But in every case, they helped solve specific design, construction or merchandising problems, and they gained the best accolade any product can get: the approval of the men who use it.



*Robert J. Allen
builder, Ft. Wayne*

Metal gable end

"We had been concerned for some time about the lack of ventilation in the attic space of our houses, and find that the all-metal louvered gable end gives us full ventilation as well as a pleasing exterior on the sides of our houses."



Maco Co.



*Bert C. Yager,
associate, Albert
Gersten, builders
Beverly Hills*

Sliding room dividers

"We have used sliding room dividers in over 300 luxury houses, because we find that the idea of separating the living room from the family room, or kitchen from the family room, adds to the flexibility and customer appeal of the house. It provides privacy without shutting out light. And there are no floor tracks to trip over or to mar carpeting."



Carlton Products



*Herman H. York
architect, Jamaica, N.Y.*

Slab vapor barrier

"On Long Island, emphasis was placed on family rooms this year, and because these are at ground level, good slabs are increasingly important. A premolded, heavy-weight asphalt membrane vapor seal protected our slabs against moisture vapor penetration."



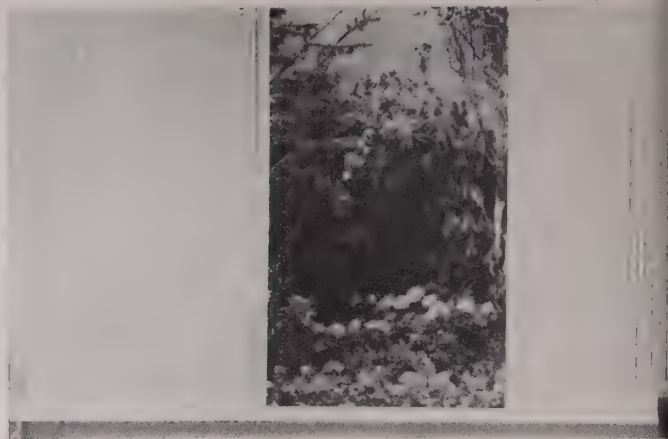
W. R. Meadows



*Gerald A. Gay
builder, Orlando, Fla.*

Vertical Venetian blinds

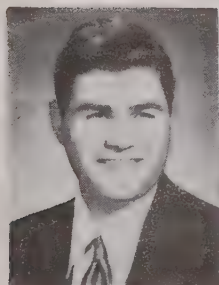
"We used three sliding window walls opening onto a patio in our houses, and had the problem of privacy and light control. Vertical Venetian blinds that draw aside like draperies were the answer. We got unanimously favorable reaction to them during our Parade of Homes. People invariably noted that almost 100% of outside light could be cut off."



*Reginald E. Marsh
architect, New York City*

Thin marble tile

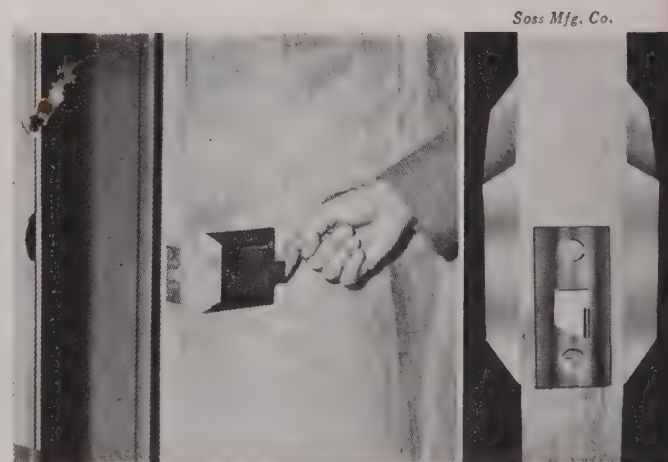
"Flexibility in use of new thin marble tile provides designers with new opportunities that were not possible with heavy marble slabs. We are quite enthusiastic about the future of this material and are continuing to specify it. It gives new luster to an old friend."



*Irving Rose
builder, Detroit*

Knobless latch

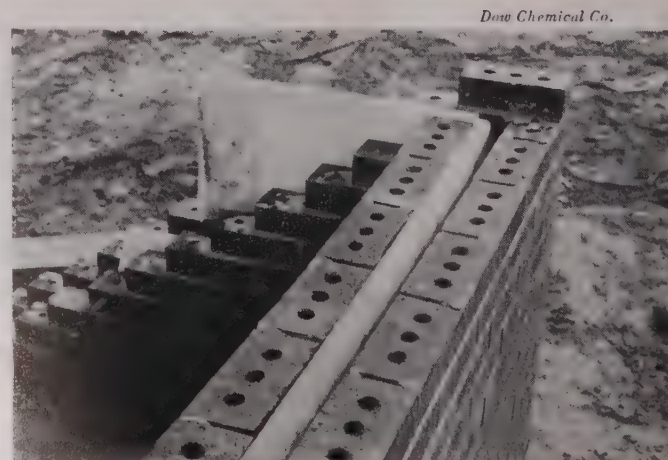
"Today's buyers are looking for modern, clean design, functionalism, and rich appearance. This new knobless door latch offers all three. One finger can flick open a door, and the smooth surface seems to fit and complement our modern flush doors, with their natural wood grain finishes."

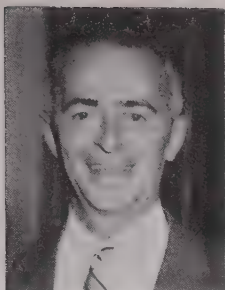


*Edward F. Fischer
builder, St. Louis*

Foamed plastic

"We use foamed polystyrene in plank form for perimeter and cavity wall insulation because it is light and easy to handle, comes in long lengths, is vapor and waterproof, and is comparatively cheap in price."





Fred P. DeBlase
builder, Rochester, N.Y.

Preprimed paneling

"We use preprimed fiber paneling for the underside of our overhangs, and for ceilings in our recreation rooms. It is economical, sizes are less wasteful, and the clip installation method speeds up production and does away with obvious nailing."



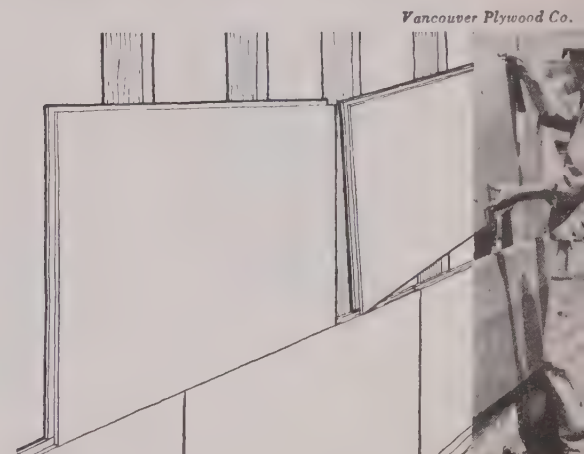
The Upson Co.



John J. LaPorte
builder, Portland, Ore.

T&G plywood

"In my experience, tongue-and-grooved plywood exterior sheathing has proved both economical and efficient in my building operations. It provides added strength where it is needed most, in the framing of the house."



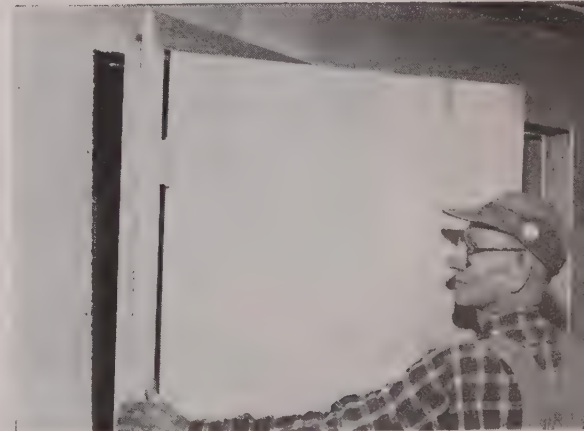
Vancouver Plywood Co.



Marvin B. Myers
builder, Rockford, Ill.

Prehung doors

"We first ordered prehung doors for five houses with skepticism, but the savings in price and labor convinced me and my carpenters. A job that used to take two hours of labor now takes 15 minutes."



Gemco



Chris Choate
architect, Los Angeles

Patterned plywood

"My vote is for a system of treating plywood called Moké (plywood is saw-cut, then formed into any of a wide range of geometric patterns). I feel it is important as well as useful because of the great decorative possibilities inherent in it." (Basic idea for Moké originated with Architect Whitney R. Smith, of Smith & Williams, Pasadena.)



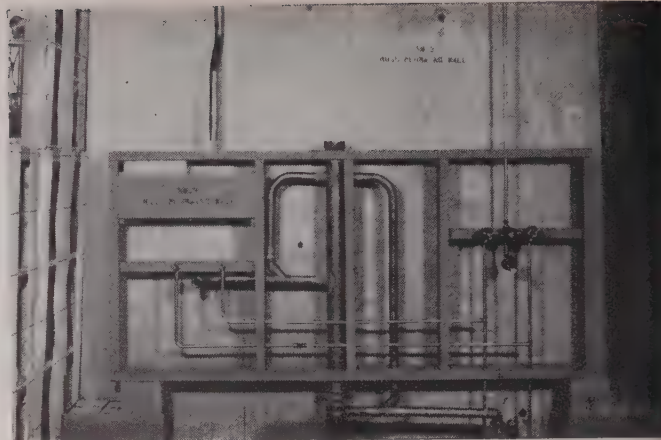
Douglas Fir Plywood Assoc.



*J. S. Weisman
builder, Pittsburgh*

Prefab plumbing wall

"We have found a prefabricated plumbing wall to be the perfect answer to one of our most pressing problems: providing plumbing for the prefabricated house. With the preassembled unit, the rough plumbing can be installed in less than an hour. And it helps sell the house to the customer, too."



Crescent Supply Co. of P.



*William Wilson Wurster
architect, San Francisco*

Small bathtub

"The small (39" sq.), low, tub is a very great contribution to the small bath. It permits a really good shower, plus tub bathing in limited space."



American-Standard



*Clifford Orth
builder, Portland, Ore.*

Accordion folding doors

"We used flexible folding doors on all closet openings, and saved substantially on installation costs while adding usable footage to our homes. Their sturdiness makes them a trouble-free item. No more warping or squeaking from doors—or their new owners!"



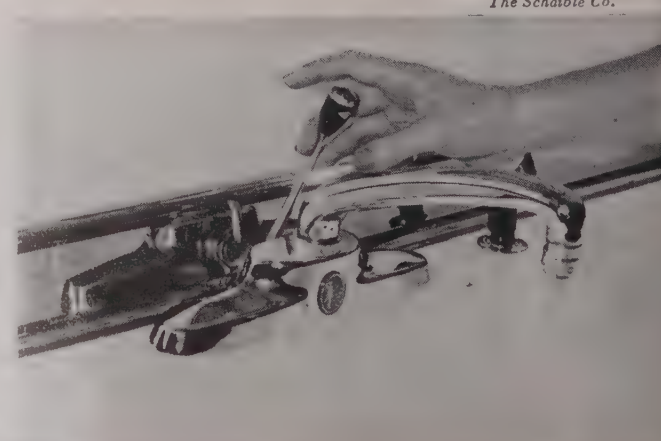
New Castle Products



*Robert P. Gerholz
builder, Flint, Mich.*

Single lever faucets

"We found the convenience and good looks of the single lever mixing faucets in our kitchens appeal to our women buyers. It's a small item in a house, but it is something they notice, talk about, and remember. And the plumbing installation is no more difficult than with ordinary faucets."



The Schaible Co.

For more Product News, see p. 180

sells fast...Insulite up to \$25 per sq.

"Buyers sure like high beamed ceilings," says Ray Hunke, successful young Wichita builder. "They regard them as a touch of real luxury. Yet with Insulite Roof Deck, I can actually beat conventional construction by about \$15 per square. And compared with other open-beam methods, Insulite Roof Deck saves me \$20 to \$25 per square—that's \$275 on a small home."

Hunke has now built and sold more than 600 homes—thanks, in large part, to his own smart design ideas. The trim, handsome home below features his highly popular exposed beam construction.

Want complete information on this modern roof-and-ceiling method? For easy-to-follow details, cost-comparison sheets and pictures, write Insulite, Minneapolis 2, Minn.

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Is electric heat about to boom?

Need for balancing load may boost installations to an estimated 300,000 houses a year by 1963

The Public Service Company of Oklahoma is planning to ask formal approval of the state's Corporation Commission to lower electric heat rates to home owners. If approved, the Tulsa company's new rate—cut down from 2½¢ per kw-hr—will put important emphasis on electric heat in an area where natural gas fields abound.

Does this news from Tulsa mean that electric heat is on the verge of a major market break-through?

Last month, more than 30 years since the first crude electric heating installations were made in some Tacoma, Wash. houses, many experts were beginning to think so.

Today about 300,000 houses in the country are fully heated by electricity. This figure includes resistance systems and heat pumps and represents about 1% of all houses with central heat. "With present sales at about 40,000 completely electrically-heated houses a year, sales in the near future will undoubtedly rise to 100,000 a year," said James E. Goff, vice president of Ceilheat, Inc.

Utility views changing. Goff's forecast is based on a widespread change of attitude toward electric heat on the part of US electric utilities. A few years ago hardly a single utility in the country (outside of cheap power areas like the TVA region) would do anything to promote electric heating. "By 1963," says Goff, "we figure 300,000 houses a year will be heated solely by electricity."

According to a recent survey of 420 "representative utilities" by the National Electrical Manufacturers' Assn., more than half, or 58%, now favor electric heat. Only 16% were "unfavorable," with 26% neutral. In the 58% group the talk goes like this:

"We will aggressively promote electric heat in '56," a large eastern utility; "We have a 1½¢ heating rate and love it," a midwest utility; "Have encouraged and modified our rate as further incentive," a southern utility. Significantly, these reactions closely parallel the attitudes of gas companies to gas heat ten years ago.

Why the views change. It is no fluke of nature that is bringing about a liking for electric heat on the part of the utilities. One of the big reasons is air conditioning. Thousands of new cooling systems connected to utility lines have pushed summer load peaks to record highs. And utilities are finding they must supply substantially more electric power in summer than in winter (25% more in Tulsa, for example).

Because air conditioning is spreading so fast and so far, many electric utilities find themselves with idle power generators during the winter, even in the North. The utilities urgently need a new winter load for balancing purposes and electric heat seems the best way to get it.



An estimated 91,000 people trooped through 85 model homes last year as American Gas & Electric Co. made electric heat a sales feature in seven-state territory (Michigan to Virginia). House above, by Canton, Ohio builder E. F. Plott has radiant ceiling system.

Within the next five years new air conditioning systems are expected to boost the utilities' summer power peaks by another 18-million kilowatts. To compensate for this rise, US utilities will need five to six million new electrically-heated houses, one expert says.

Facts for builders. Builders will find electric heat economical to use, depending mainly on the local power rate and the price of competitive fuels. The cut-off point seems to vary from 1½¢ to about 2¢ per kw-hr. Above 2¢ the operating expense may prove too high, but below 1½¢ electricity can compete in almost any area of the country.

An example is the Indianapolis Power &

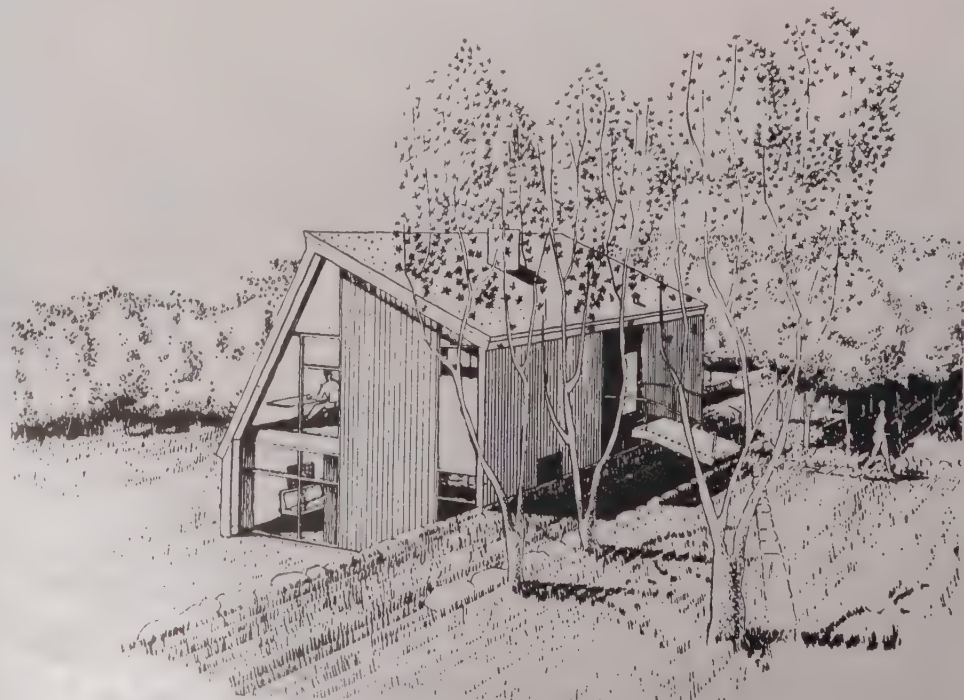
Light Co. which offers a special 1.7¢ rate. Company vice president W. T. Richards told H&H the 1.7¢ rate makes heat pump operating bills in an average 1,250 sq. ft. house comparable to local gas bills, 25% lower than for oil. "Operating costs for electric radiant heat are somewhat higher than for gas or oil, but are compensated by the low installation cost of a radiant system," Richards says.

Insulation is important. But no utility in the country will guarantee operating costs without "adequate house insulation"—at least 3" in walls and as much as 6" over ceilings. Moreover, FHA's changes in minimum property requirements last year (July and Sept. H&H News) have boosted insulation standards for electric heat by one-third, call for an over-all heat loss of no more than 40 Btu's per sq. ft. of living area.

Extra insulation cost pays for itself, F. T. Walsh, president of Sunwarm, Inc., points out. With less heat loss resulting, a builder needs less heating equipment. Records show that savings on the heating system are usually greater than the extra insulation cost.

With many builders finding electric heat economical and utilities promoting and encouraging its use, the future, for Walsh and other manufacturers in the field, looks good indeed.

continued on p. 182



Solar house of 1,452 sq. ft. shown above, will be built by MIT near Boston. A 666 sq. ft. collector on south roof is tilted 60° from horizontal to absorb heat. Collector, consisting of two layers of glass spread over black-painted copper sheet, transfers heat to water flowing through pipes underneath. Heated water is piped to 1,500 gallon basement storage tank. Sun warms water to "approximately 150°" for heating, provides "80% to 90%" of heat required annually, including that needed for domestic water. Standby boiler is used on cloudy days. MIT Professor Lawrence B. Anderson says, "operating costs will be very low but initial equipment cost will be too high for average builder in near future." Test house experiment will explore ways of reducing cost.

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Whether your demand is for sanitary fixtures in glistening gleaming white or for units of matched color in pink, tan, blue, green or grey, you'll find your choice in AllianceWare—the most complete line of formed metal sanitary fixtures—preferred by an ever-increasing number of progressive builders and plumbers from coast to coast.

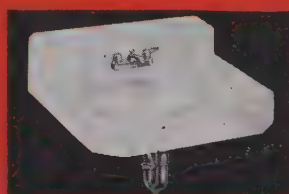
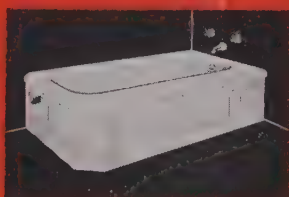
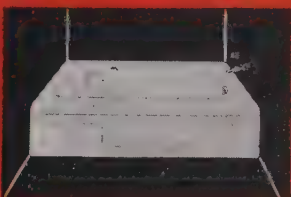
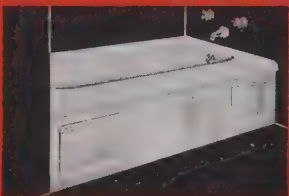
BATHTUBS

5-foot tubs—recess and corner models—of porcelain on steel each with an integral wall guard flange that prevents water leaks between tub and wall. The AllianceWare exclusive patented method of wall-hung installation keeps tub from settling and pulling away from the wall. AllianceWare design provides a "grab-rail" the full length of the tub for greater safety in entering and leaving the bath.

All AllianceWare tubs are available in white, pink, blue, green, grey, and tan.

**For modernization
—for a shower receptor**

The AllianceWare "Junior" — a 42" recess tub illustrated below — excellent for modernization jobs in limited space and far superior as a shower receptor.



LAVATORIES

Wall-hung shelf back lavatory of porcelain-on-steel with or without overflow.

Flat rim lavatory with deep and generous bowl for tile or linoleum installations.

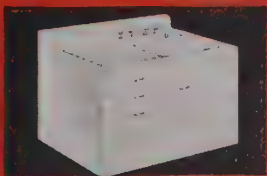
All AllianceWare lavatories are available in white and five colors.



CLOSETS

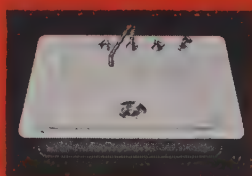
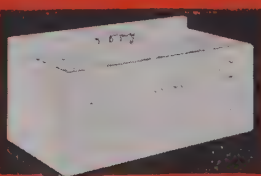
Close-coupled combinations —one a reverse trap, the other a wash down—the types most popular in today's construction. Each style assures positive, quick flushing.

Available in white and five colors.



DE LUXE SINKS

Porcelain-on-steel formed from heavy, 14 gauge. These sinks have double bowls or single bowls. Sliding drain boards are optional on some models. May be mounted on standard sink cabinets. Several models may be installed on legs without cabinet.



FLAT-RIM SINKS

Single bowl or double bowl, with and without faucet ledge. Also sink and tray combinations with and without faucet ledge. The design of these sinks permits a continuous tile or linoleum drain-board to run flush with the edges of the rims.



Write for the complete AllianceWare catalog of detailed specifications and installation diagrams.

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TECHNICAL NEWS

First US atomic heat plant put into operation

For the first time in the US waste heat from atomic reactors is being utilized in a heating system for buildings.

Now in operation at the Atomic Energy Commission's Hanford, Wash. plant, the system resembles experts' predictions of likely methods to be used in the future for heating entire housing projects by atomic energy.

How it works. Columbia River water is piped for cooling purposes through a bank of plutonium reactors. The water takes away immense amounts of heat and slight amounts of radioactivity.

The heated water is passed through large heat exchangers where its heat is transmitted to a secondary water system containing ethylene glycol (to prevent freeze-up during sub-zero weather). The heated glycol water is then pumped to various buildings for space heating in a conventional manner. The system's total Btu capacity is said to be enough to heat a thousand average houses.

Safety is assured by keeping higher pressures in the secondary glycol network than in the primary water system. In case of a leak the water would flow from the non-radioactive secondary circuit back to the primary reactor circuit, thus preventing radioactive water from reaching the heating system.

Workability of the system has been demonstrated by a similar installation made in 1951 in a 32,000 sq. ft. building at Britain's Harwell atomic center, first building in the world to be heated by atomic energy. (The Russians have not yet been heard from.)

Cost facts. The Hanford system will save an estimated \$59,000 a year on fuel, compared with conventional heating bills. Total installation cost was \$614,000 which is \$444,000 more than a conventional fuel plant would cost, but the extra expense will be paid back by operating savings in less than eight years.

Experts envision comparable operating savings in heating future housing projects with systems similar to Hanford's. Hot water, they predict, will be distributed underground from a shielded, central atomic heat source.

The Hanford system was designed by GE engineers working with C. T. Main, Inc., Boston architect-engineer firm.

Plastics have big potential in houses, experts report

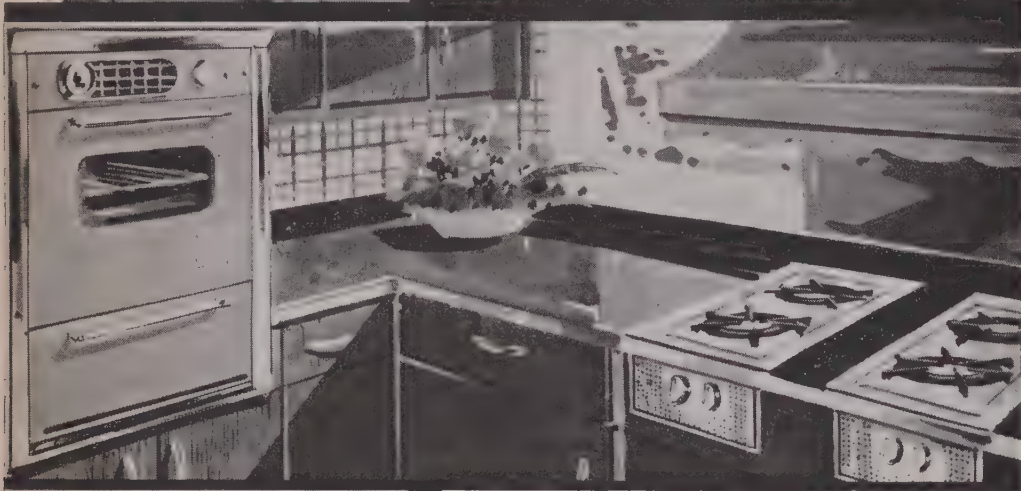
Two of the most likely future uses of plastics in houses are: 1) as a structural material. 2) for piping.

That was the opinion of experts who attended a Building Research Institute conference on plastics at the University of Michigan last November. Present were 91 US plastics and building specialists.

Reporting on structural plastics, MIT architect Richard W. Hamilton said that for the first time ceiling, walls and floor could be molded in one piece, by means of mono-



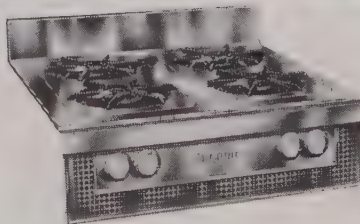
PREWAY gas
Bilt-Ins
make your dollar
more productive



Showing at
Space 767
Coliseum



Patents Pending



PREWAY Counterchef is available in your choice of 4-burner model, pictured here, or 2-burner unit illustrated in room scene above. Both in rustproof "302" stainless steel.

Successful builders don't spend more on the homes they build than anyone else — but they do get more from the money they spend. For example, if you have the facts on PREWAY gas Wallchef and Counterchef Bilt-Ins, you know you can readily trim a hundred dollars or more from the cost of a modern kitchen. These fully A.G.A. Approved units, with patented features and automatic controls, are the easiest to install. You gain time here, save more money on labor. And because PREWAYS are judged to be the world's most beautiful built-ins, they add a special note of luster to the appearance of your kitchen.

Investigate the potential gas Wallchef and Counterchef units offer you. Plan to see them at the Chicago Show or at the distributor's display room in your area. Send back the coupon today for full information on PREWAY'S full array of features, finishes and dimensional specifications.

PREWAY, INC.
2156 Second St., N.
Wisconsin Rapids, Wis.

Gentlemen:

Please send me data bulletins on gas Wallchef and Counterchef units. (If data bulletins on electric Bilt-Ins are wanted, too, check here ☐)

Name _____

Company _____

Address _____

City _____

State _____

Approval:



Acceptable to: F.H.A. — V.A.



2156 Second St., N.
Wisconsin Rapids, Wisconsin

Chicago Office and Display —
Space 1198 — Merchandise Mart

lithic plastic bents. The bents, developed by MIT designers, are 16' long, U-shaped and will be cantilevered out from a central utility core of a test house to be built this year (details on p. 176, Dec. '55, H&H).

One of the biggest advantages of plastic pipe is its high resistance to corrosion, said R. A. Bogan of Monsanto Chemical Co. It has been used successfully in such diverse fields as mining, petroleum and medicine (besides garden hose, many home owners might add). Where pipe failures have occurred, Bogan said, they are due chiefly to improper plastic selection for a particular use, or poor installation.

Bogan said the plastics industry believes it is still in a pioneering stage today and plastic pipe has a "tremendous potential." Its use is expected to increase tenfold in coming years. Two big anticipated uses for builders: in sewage and waste lines.

Electricians hear talk about a switch to aluminum wire

The present copper crisis may be the best thing that ever happened to aluminum wiring.

Don B. Clayton, president of the National Electrical Contractors' Assn. has just used blunt words to warn copper producers that "unless the copper supply is made more dependable and prices lowered, the electrical industry will use more and more aluminum."

Price spiral. Keynoting the electricians' recent New York convention, Clayton pointed out that since World War II copper prices have spiraled up 258%—from 16.7¢ per lb. (at the producer level) to 43¢ today. In the same period aluminum advanced only 68%, with ingots now selling for 24.4¢ per lb.

Allowing for the difference in weight, copper is about four times as expensive as aluminum. Explains Clayton: "45 lbs. of aluminum have the same

current-carrying capacity as 100 lbs. of copper, so you see what our industry faces: 100 lbs. of copper at \$43—if you can find it—against 45 lbs. of aluminum at \$10.98."

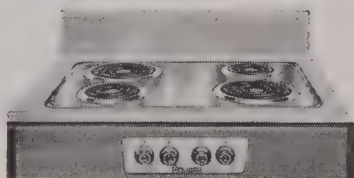
Trend to aluminum? The copper squeeze has already prompted several important switches to aluminum, Clayton said. He cited the case of the Western Electric Co., makers of cable and wire for the Bell system, which announced last September it would use aluminum instead of copper for making telephone cable. A spot check by H&H turned up two additional facts: 1) since the late forties US electric utilities have switched to aluminum for a million miles of overhead transmission lines; 2) every major wire manufacturer but one—Phelps-Dodge—now makes aluminum wire.

How fast will the industry adopt aluminum for wiring houses? Manufacturers have hitherto said not very fast. Reason: small electrical contractors like copper because it is easier to use. Clayton's words, however, may signal a wide change of opinion.

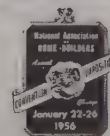
PREWAY electric
Bilt-Ins
give your dollar
greater value



Patents Pending



PREWAY Counterchef is available in your choice of 4-element model, illustrated here, or 2-element unit shown in above room scene. Both in rustproof "302" stainless steel.



Showing at
Space 767
Coliseum

Kitchen costs are not as unshrinkable as they seem. It is possible, yes, *easy*, to reduce the cost of a kitchen and offer even a better kitchen with PREWAY electric Wallchef and Counterchef Bilt-Ins. With these Underwriters Approved units you can readily trim a hundred dollars or more from your estimates without sacrificing a single detail of function or automatic performance — for PREWAY provides every feature. Even more, because these Bilt-Ins are easiest to install, you gain time, save more money on labor. And because Wallchef and Counterchef units are judged the world's most beautiful built-ins, they add a special note of luster to the appearance of your kitchen.

Plan to see these great electrics at the Chicago Show, or at the distributor's display room in your area. Send back the coupon today for full information on PREWAY's full array of features, finishes and dimensional specifications.

Approval:



Acceptable to: F.H.A. — V.A.

PREWAY Inc.

2156 Second St., N.
Wisconsin Rapids, Wisconsin

Chicago Office and Display —
Space 1198 — Merchandise Mart

PREWAY, INC.
2156 Second St., N.
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Gentlemen:

Please send me data bulletins on electric Wallchef and Counterchef units. (If data bulletins on gas Bilt-Ins are wanted, too, check here ☐.)

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Presidential HOMES

ASK THE 61 BUILDERS WHO



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CARL T. MITNICK
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American Kitchens of copper and birch on rugged steel frame . . . ”
*says Mr. C. Grady Cates, Jr., President,
 Hines Building Corporation, Dallas, Texas*



This is an aerial view of some of the homes being built by the Hines Building Corporation in Valwood Park, near Dallas. All 222 homes feature the birch and copper "Pioneer" by American Kitchens.



Here is how HINES BUILDING CORPORATION used the "Pioneer." This is the "Pioneer" kitchen of one of the 222 homes the Hines Building Corporation is building in Valwood Park, a \$45,000,000 planned community near Dallas. The dramatic beauty of the natural birch and antique copper is a high spot of the home, blends perfectly with the overall design of the home. For more elaborate kitchens, additional cabinets and accessories can be added, as well as matching antique copper appliances such as the famous American Kitchens "Roto-Tray" Dishwasher, the new American Kitchens "Set-In" Countertop Range, and the new American Kitchens "Set-In" Waist-High Oven. Both range and oven available in gas or electric models.

See the big American Kitchens display at the January Builders' Show, Conrad Hilton Hotel, Chicago!

The *Pioneer* by
American Kitchens

AMERICAN KITCHENS DIVISION **AVCO** CONNERSVILLE, INDIANA
SELLS YOUR HOMES FASTER!

American Kitchens, Dept. HH-156
 Connorsville, Indiana

- ☐ I'd like to have "no obligation" quotation on my next kitchens.
- ☐ Please send your new Architects' and Builders' File.

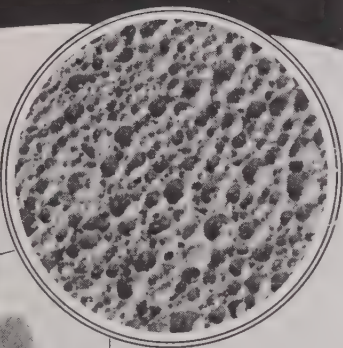
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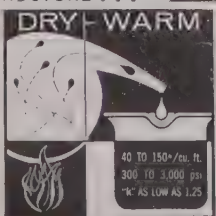
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strengths for structural applications
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cork tile on grade
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results as predetermined
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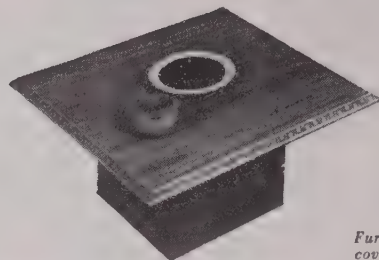
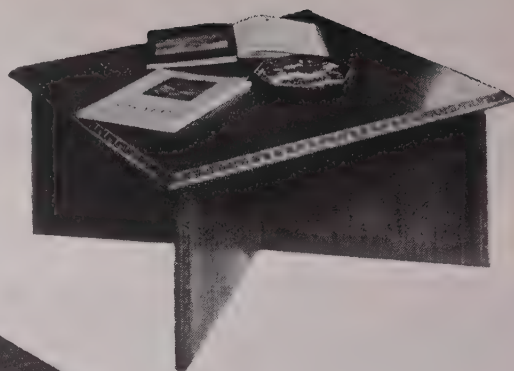
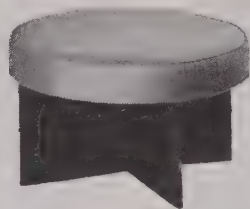


Write, wire
or 'phone . . .

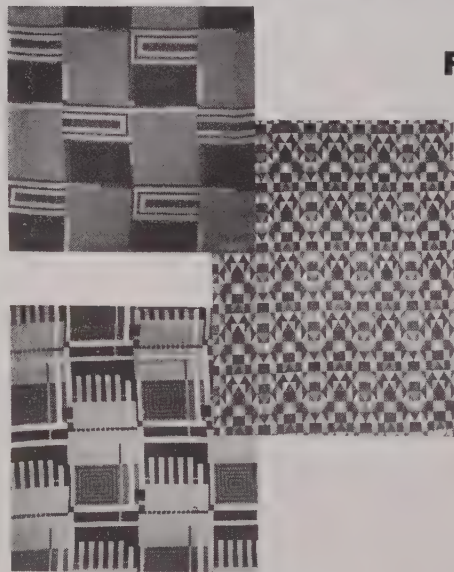
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158 FLETCHER STREET • ALPENA, MICHIGAN
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NEW PRODUCTS

for further details check numbered coupon p. 272



Furniture made by Heritage-Henredon; fabrics, wall coverings by F. Schumacher.



FLLW designs home furnishings

- a. **The furniture, fabrics and wall coverings** you see here have been a subject of conversation among architects, builders and decorators for two months. In November the first Frank Lloyd Wright designs in home furnishings appeared in stores throughout the country. Since that time magazines, newspapers and store displays everywhere have taken more than passing note of Mr. Wright's remarkable efforts in a field new to him, though closely related to most of his work over the past 60 years and closely integrated with that work.

A carved motif, not unlike the ancient Greek key design in reverse, characterizes the architectural theme of each piece—from stacking stool to fabric pattern. It is everywhere apparent, calling attention to the long edges of benches and chests, lending visual depth to flat fabrics and wallpapers.

These devices are intended to support Mr. Wright's architectural objectives: Just as the three-dimensional qualities of the fabric patterns tend to enlarge the spaces in which they are used, so the flexibility of the unit furniture tends to tie together adjoining rooms into an open, flowing plan. To achieve this result, Mr. Wright designed low chests that can turn a corner (and thus link one room to the next), book-cases that will serve as room dividers (and thus replace the eye-stopping, solid partition) and tables in triangular sections that can be combined with others to form a hexagonal whole (and thus help defeat the "boxiness" of most rooms).

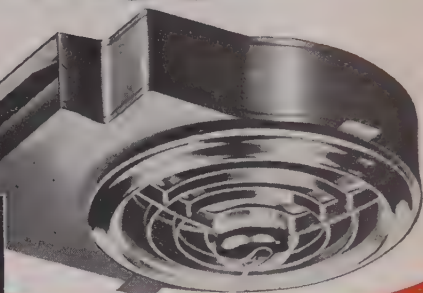
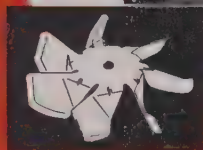
continued from p. 192

pryne
rhymes with FINE



Blo-Fans

In exhaust ventilating, Pryne Room Ratings are your assurance of the required air change cycle...under realistic operating conditions. To select the right exhaust fan for any room all you need is the room square footage and the Pryne Room Rating Fan selector.

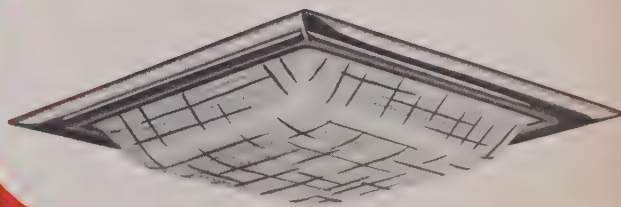


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Pry-Lites

In lighting, Pryne Room Rating tells you quickly, from the room square footage, the exact lighting fixtures required to assure the proper level of illumination in every type of room.



here's how
works for YOU!



The Room-Rated Fan Calculator translates room square footage into CFM ventilating requirements for every condition — and indicates the right size and type of fan to specify.

The Room-Rated Light Calculator translates room square footage into foot candles of illumination required for various conditions — and shows the right type of lighting fixtures to specify.

Meet MISS R.R. at the NAHB Convention, Booth 57 Lower Exhibition Hall, Conrad Hilton.



FREE



CALCULATORS

Scientifically tested for accuracy at Pryne's Room Rating Laboratory... where lighting and ventilating engineers test Blo-Fans and Pry-Lites under actual home conditions and rate them according to their performance. All figures are based on SQUARE FEET so that accurate specifications may easily be made from floor plan drawings!

MAIL TODAY!

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Rush the FREE Room-Rated Calculators checked:

☐ Fan Calculator ☐ Light Calculator

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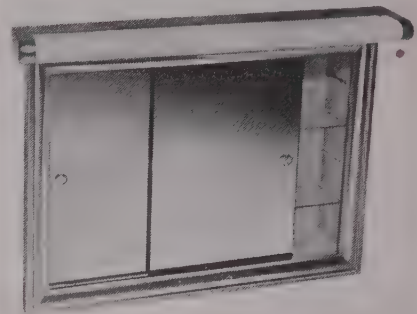
Company _____

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City _____ Zone _____ State _____

NEW PRODUCTS

for further details check numbered coupon p. 272



- b. **Stainless-steel bathroom cabinet** slides open on nylon rollers, lights up by means of fluorescent overhead tube. Mirrored front panels are channelled with $\frac{1}{2}$ " stainless steel banding top and bottom, framed by dentproof 2"-wide steel molding. Over-all sizes: 34" x 25 $\frac{1}{4}$ " x 5 $\frac{1}{2}$ ", \$35.85; 43" x 34" x 5 $\frac{1}{2}$ ", \$69.60; 52" x 34" x 5 $\frac{1}{2}$ ", \$77.

Manufacturer: Mirro-Chrome Co., Inc.
Bronx 51, N. Y.



- c. **Wall unit** combines intercom system, clock, radio all in one. Master control with five room speakers includes a switch to front door bell. Unit can be installed between studs in any 4" wall. Panel face comes in seven colors. Panel 9 $\frac{1}{2}$ " x 13 $\frac{1}{2}$ "; box, 11 $\frac{1}{2}$ " x 8 $\frac{1}{4}$ " x 4". Price: \$110. plus installation.

Manufacturer: Talk-A-Radio Mfg. Co.
Dallas, Tex.



- d. **Wood-trimmed cabinet** typifies trend towards a choice of materials in bathroom paneling, base cabinets. Frame is made of Philippine mahogany, maple or oak to match other trim. Mirror front slides easily on steel and plastic tracks, opens on roomy shelf storage. Size: 29 $\frac{1}{2}$ " x 21 $\frac{3}{4}$ ", 27 lbs. Price: \$35.

Manufacturer: Tedrick Bros. Mfg. Co.
Kent, Wash.

continued from p. 196

Light, air and beauty for any bathroom under the sun.

The WASCOLITE AIRDOME® gives you overhead daylight plus ventilation. Now you can locate bathrooms anywhere! The

WASCOLITE SHOWERWALL provides the convenience of a stall shower right in the bathtub. These new products

are made with lightweight, shatterproof acrylic plastic. They offer glamour and sales appeal at a cost so low it will amaze you! Write for literature.

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WASCO CHEMICAL (CANADA), LTD. • TORONTO, ONTARIO

The 1500 homes of Pittsburgh's suburban Garden City... *

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Prices—\$12,500 to \$22,500

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* See pages 146 to 153

A PROVED NEW HOME-OWNER PREFERENCE!

9 out of 10 want kitchens of wood!*

*from a 1955 survey by a leading magazine of families building homes for their own occupancy, indicating that 91% of the respondents chose kitchen cabinets of wood. Equally important, this preference is a 10% gain in the use of wood in the past ten years!



to fill this proved demand...

KITCHEN MAID **SHADOW-LINE** CABINETS!

Just as surely as wood belongs in the kitchen...a fact upon which 9 out of 10 home-owners agree...Kitchen Maid cabinets belong. On all points, Kitchen Maid Kitchens are keyed to contemporary demands. Dramatic new Shadow-Line styling, the most expressive wood cabinetry in America, finished in exclusive new Nutmeg Natural to accent the warmth of the wood. Quality hardwood construction—plus the ultimate in accessories and cabinets for built-ins. Custom builder or project builder, Kitchen Maid offers you more of the things your prospects look for, and deserve, in quality kitchens of wood.

Visit Booths 701 and 702, Chicago Coliseum, during the NAHB Show for the premiere showing of Kitchen Maid's wonderful new knife safe, condiment safe, slide-away storage unit and other exciting new developments.

...WITH THESE STRONG-SELL KITCHEN MAID FEATURES

Contemporary or period hardware

Shadow-Line—smart, two-dimensional styling

Beautiful Nutmeg Natural finish (or a choice of lovely decorator colors)

A complete line of quality cabinets for cooking and appliance built-ins

Many, many others, including adjustable shelves, sliding glass doors, planning desk, sit-down sink and portable serving-laundry cart

Kitchen Maid Corporation
461 Snowden Street, Andrews, Indiana

Please send new booklet showing 10 practical kitchens with details of the complete Kitchen Maid line.
I am an ☐ Architect ☐ Builder ☐ Dealer.

Name _____

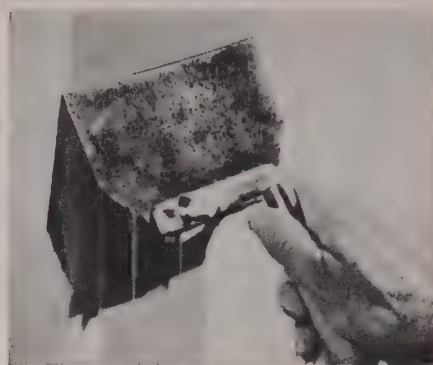
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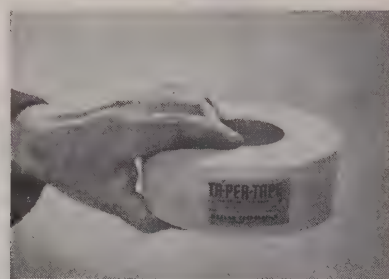
NEW PRODUCTS

for further details check numbered coupon p. 272



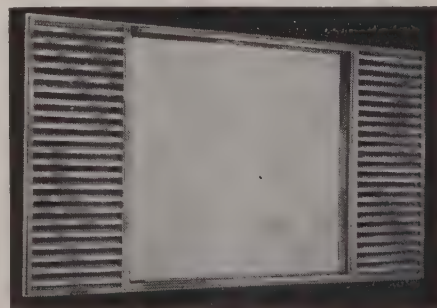
- e. **Dry-wall finishing tool** minimizes need to sand joints or nail spots. Three interchangeable blades give shearing, feathering and finishing action from application of bedding compound through final finishing. Blades 8" x 4" curved edge, 11" curved edge, 11" x 4" straight edge. With blades, \$4.95.

Manufacturer: Goldblatt Tool Co.
Kansas City 8, Mo.



- f. **Nonperforated joining tape** (you might use it with the finishing tool above) of 100% virgin hemp, is only $\frac{1}{3}$ the weight of ordinary tapes. Surface is sanded to give high bonding qualities, permit strong joints. Feathered edges make for flatter bedding to cement, lay of hemp fibers gives extra lateral strength and *Ta-Per-Tape* is porous enough to permit air to escape. Price: 250' roll from \$1.50 to \$1.50.

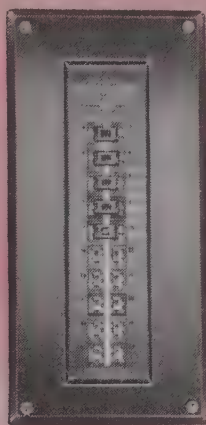
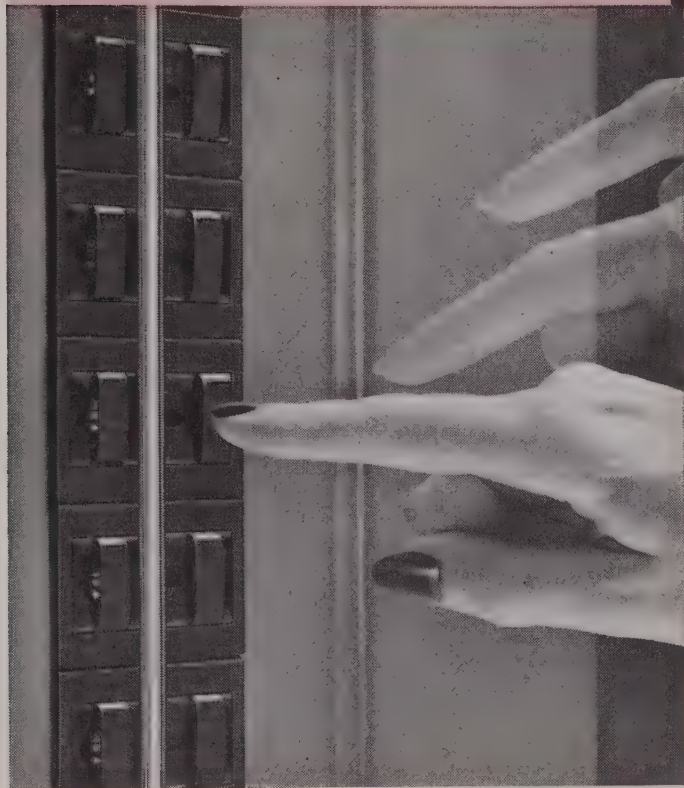
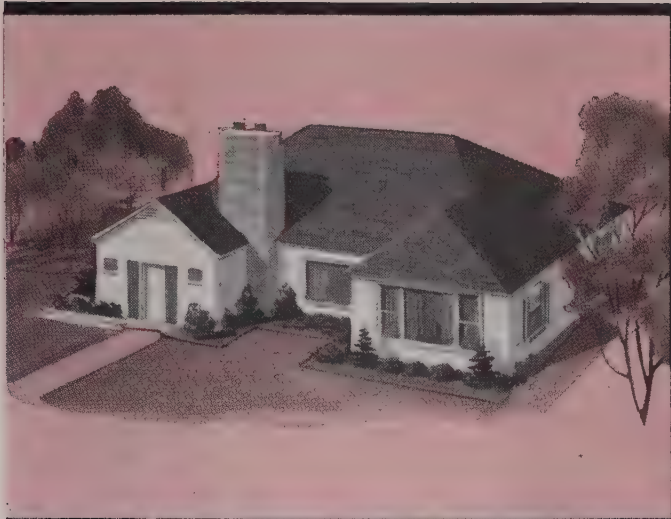
Manufacturer: Marvan Corp.
West Hartford, Conn.



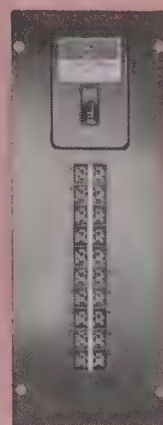
- g. **Aluminum window** comes as complete unit ready to be nailed into rough opening. Basic frame sections have 7" minimum depth to provide for insulated glass. Window can be used in multiples in either ribbon or stack layouts, in any combination of fixed or ventilating sections. Picture window, similar to photo above, 96" x 50", about \$290.57; insulated glass costs \$104.22.

Manufacturer: The Maco Corp.
Huntington, Ind.

continued on p. 196



XD-18 ELECTRI-CENTER—also
available in 12 circuits



P1-20-3M ELECTRI-CENTER—
also available in 14 circuits

Modern 100-Amp Panels for Modern Homes

**...YOURS WITH BULLDOG
PUSHMATIC ELECTRI-CENTERS**

Better wiring means better living. And what better way than with Bulldog Pushmatic Electri-Centers®?

The new "3M" Series, for instance, features 100-amp service in a 14 or 20 circuit enclosure—provides a safe, positive main disconnect as well as spaces for 220V appliance circuits and 110V lighting circuits.

The 100-amp "XD" Series features a split-bus arrangement—the top section for 220V appliances, the lower for 110V light-

ing—with extra spaces to add future circuits as required.

Both, of course, provide *Pushmatic dual protection* and *push-button convenience!* Duo-Guard Pushmatics® safeguard branch circuits *plus* lamp and appliance cords. And there's never a fuse to change—just a push restores service.

Easy to install, economical, modern, safe—Electri-Centers will add real zip to sales. For details see your electrical contractor or write Bulldog Electric Products Co., Detroit 32, Mich.

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See them demonstrated at Booth 861, Coliseum—NAHB Show—Chicago

IF IT'S NEW... IF IT'S DIFFERENT... IF IT'S BETTER... IT'S

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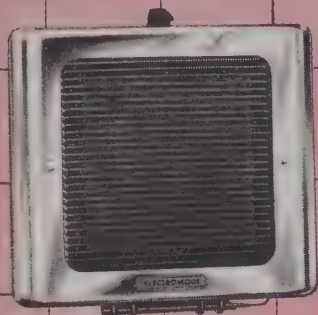
Export Division: 13 East 40th Street, New York 16, N. Y. • In Canada: Bulldog Electric Products Co. (Canada) Ltd., 80 Clayson Road, Toronto 15, Ont.

"Better Living Through

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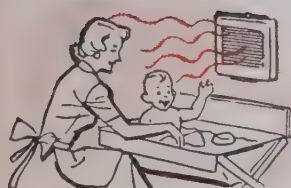
All-Electric Heating"

Division Of
COMMERCIAL CONTROLS CORPORATION



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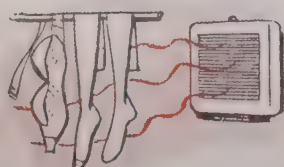
Warmth..when you want it!



FOR BABY



FOR DAD



FOR DRYING LINGERIE
and
101 OTHER USES

With a flip of the switch the Electromode Wall-Type Bathroom Heater gives you an abundant blanket of clean . . . odorless . . . all-electric heat. Wonderful for the nursery. Bathe your pint-sized Prince in King-sized warmth. Dad will go for it in a big way too! There is no longer any need for the "Lord of the Castle" to dread shaving or bathing in a chilly bathroom. Watch Dad's disposition improve. Literally 101 other uses; drying lingerie . . . hair . . . for any small room . . . and absolutely the answer for hard to heat areas.

Over 300,000 homes are now heated completely by electric. For over twenty-five years Electromode has been producing all-electric heating systems and equipment to satisfy either supplemental or complete heating needs . . . FOR HOME . . . FOR FARM . . . AND FOR INDUSTRY.

See us at Booth No. 439 N.A.H.B. Show, Sherman Hotel, Chicago—Jan. 22 thru 26.

► Send for free . . . colorful literature on Electromode's complete line.

"WORLD'S LEADER IN ALL-ELECTRIC HEAT SINCE 1929"

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Division Of
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ROCHESTER 3, N. Y.

NEW PRODUCTS

for further details check numbered coupon p. 272

- h. Garbage disposer with telescoping adjustment can be moved up or down to fit any plumbing rough-in without changes in existing plumbing. Collar at top loosens so disposer neck can be raised or lowered to fit perfectly with drain pipe of sink. *Robot-Rotor* action acts like an electronic brain by automatically selecting shredding or



grinding action to the kind of waste being fed disposer. Continuous feed method eliminates need to wait before reloading, provides unlimited capacity. Thermal overload relay protects against accidental overheating, is reset manually. Manufacturer says disposer in action passes "whisper" test since extra-resilient mountings between unit and sink opening and unit and drain connection make for quiet operation. About \$96.50.

Manufacturer: In-Sink-Erator Mfg. Co.
Racine, Wis.

- i. *Cassette* safeguards against overflow by using a minimum amount of water. Bowl protection at rim and well, and compact overall design of bowl and tank further stress safety features. Made all of a piece, *Cassette* bowl takes entire water contents



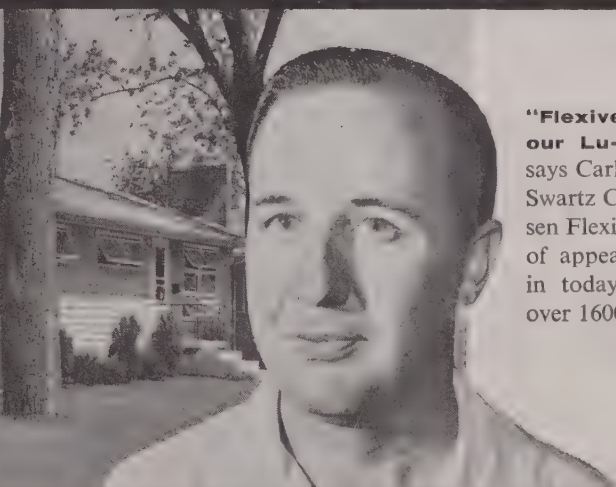
of tank without overflowing, protects against the danger of flooding from dropped toys, or other objects. Compact width, 18" overall, means installation is possible even in limited space, so *Cassette* can be used in small remodeled bathroom areas or in new building construction where additional space may be difficult to come by. *Cassette* prices not quoted.

Manufacturer: W. A. Case & Son
Buffalo 3, N. Y.

continued on p. 200

builders who find help sell homes faster!

"We chose Flexivents for versatility plus buyer acceptance," says Roy Spande, builder of Westwood Gardens in St. Paul, Minnesota. "We find Flexivents offer economy of assembly and installation plus consumer acceptance that helps to sell our homes faster."



"Flexivents bring economy to our Lu-Re-Co project homes," says Carl E. Swartz, partner in J. J. Swartz Co., Decatur, Illinois. "Andersen Flexivents give us the wide range of appearance so much in demand in today's homes. We've installed over 1600 with no service calls."

"Good design...easy construction, quick sales with Flexivents," says Edward W. Pratt, president of Wake-Pratt Construction Co., in Royal Oak, Mich. "We like the clean, horizontal lines of Flexivents that give the impression of length to our houses."



Andersen Windowalls

TRADEMARK OF ANDERSEN CORPORATION

ANDERSEN CORPORATION, BAYPORT, MINNESOTA



New Double-Duty

REMINGTON STUD DRIVER

**Sets both $\frac{1}{4}$ " and $\frac{3}{8}$ " studs in
steel or concrete — in seconds!**

Light-, medium- or heavy-duty fastening, the new Model 455 Remington Stud Driver speeds the job. It sets *two* different size studs . . . up to 6 studs per minute, either size . . . and offers new possibilities in anchoring conduit clips, steel frames, wood forms and many other fixtures.

Powerful 22 and 32 caliber cartridges drive $\frac{1}{4}$ " and $\frac{3}{8}$ " studs *solidly* into steel or concrete. For special medium-duty work, the smaller cartridge is used with the larger stud. Result: the greatest flexibility ever in a cartridge-powered tool! Just clip coupon for details about this cost-saving fastening method.

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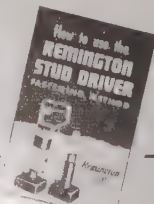
Please send me your free booklet which shows where and how to use the cost-saving Remington Stud Driver fastening method.

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Firm _____

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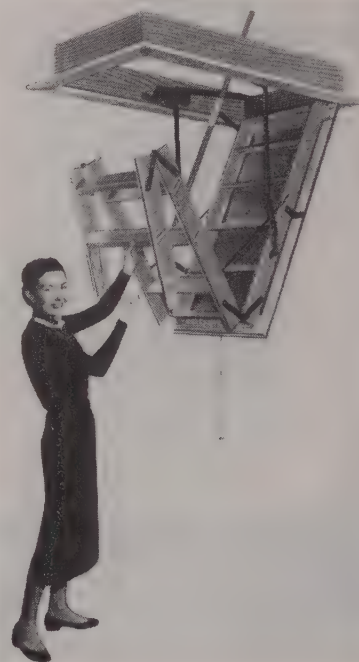
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NEW PRODUCTS

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- j. All-steel disappearing stair requires only one ceiling opening, jack-knives up into well when not in use. Easily installed, it takes a rough opening $22\frac{1}{2}$ " wide, plus length (from 46" to 60"), requires less



than 12" attic clearance with height adjustable 6" to 8". Nonskid treads have rounded edges, hand rail and adjustable balance bar protect against falls.

Manufacturer: Huntington Industries, Inc.
Memphis, Tenn.

- k. Fiber glass laundry tubs are lightweight, easy to assemble on the job, can be set up and readied for connection to plumbing outlets in minutes. Adjustable metal legs, base simplify leveling. Tubs have rounded



corners for easy cleaning, come in four colors and are shock-, stain- and chip-resistant. Approximate prices: single unit, \$45; double, \$95; triple, \$135. All with faucet, soap dish.

Manufacturer: The Selfridge Co.
Cleveland 3, Ohio

continued on p. 204



Fred DeBlase
2015 Elmwood Avenue
Rochester 20, N. Y.
General Bronze—Pan-O-Rama

IN THE "56 HOUSES FOR 1956" EXHIBIT

who use windows and doors weathersealed with Schlegel Certified Woven Pile

Every home you build is an exhibit house until it's sold. You can add sales appeal with many of the features you see in the 56 houses for 1956, like the fresh treatments of windows and doors to gain new effects.

To make the most of the windows and doors you use, do as many of the 56 national exhibit builders do—specify units that are weathersealed with Schlegel Certified Woven Pile.

You can use this feature to demonstrate the all around fine construction and the attention to detail you incorporate in your homes.

Show your prospects how windows glide silently and almost effortlessly on live, flexible, sound absorbing woven fibres. And to demonstrate how the Schlegel pile keeps out drafts and moisture, simply show prospects the weather-sealing around the windows of their cars. It doesn't leak air or rain and it keeps out dust and dirt. It outlasts the car. This is the same material—made by the same experts—that you get in windows and doors weathersealed with

Schlegel Certified Woven Pile. That's why it pays to specify Schlegel Woven Pile Weather Seal.

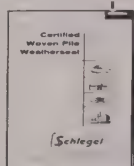
Only Schlegel Woven Pile Weather Seal does all these things:

1. Positively seals out wind and wind-driven rain up to 80 and 90 miles an hour—hour after hour, day after day.
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4. Provides a completely noiseless seal.
5. Assures freedom from rust, shrinkage and bending.
6. Provides a positive seal even after a *million* openings and closings of the window.
7. Helps reduce condensation.

To get complete information on Schlegel Woven Pile Weather Seal, send for Bulletin WS-100. Simply fill in and mail the coupon.



Rochester 7, N. Y. • Oakville, Ont., Canada



SCHLEGEL MANUFACTURING COMPANY
277 N. Goodman Street, Rochester, N. Y.

Gentlemen:

Please send me your Bulletin WS-100 containing full information on Schlegel Woven Pile Weather Seal.

Name..... Title.....

Company.....

Address.....

City..... Zone..... State.....



L-M Perma-Line fibre pipe, used for house-to-street sewers at Lawrence Manor, Sunnyvale, Calif., by McClenahan Company, plumbing contractors who handled the entire installation.

Perma-Line® Saves 50 to 75% of Sewer Installation Cost

All house-to-street sewers in Lawrence Manor, near Sunnyvale, California, are fibre pipe. Jim McClenahan, president of McClenahan Company, the plumbing contractor, uses L-M Perma-Line pipe because of its ease of handling and speed of installation. At \$5 per hour normal man-hour cost, L-M Perma-Line saves \$10 to \$15 per house. Normal total labor cost of \$20 for laying a 40-foot sewer is cut to \$5 to \$10. Total saving on this 190-house tract will be between \$1900 and \$2800.

During the past four years the McClenahan Company has installed over 100,000 feet of fibre pipe without ever having to replace any installation because of failure of the pipe.

To make joints in Perma-Line pipe, you just drive it. Precision-tapered couplings on tapered pipe ends make a tight, leak-proof, long-lasting joint that isn't disturbed by ground heaving or swelling, and is root-proof. Perma-Line is light, tough, and strong. Comes in 5, 8, and 10-foot lengths. It needs no cementing or calking. It can't rust, doesn't shatter. Perforated Perma-Line is used for foundation drains, septic-tank beds, land drainage; solid Perma-Line for sewers. Full line of couplings, fittings, and adapters is available.

Get complete information. Mail the coupon or ask your plumbing distributor to get in touch with us.



Perma-Line pipe being laid in house-to-sewer trench. This pipe saves \$10 to \$15 per house, according to Mr. McClenahan. Backfilling is done with the finely granulated earth dug from bottom of trench, to assure a smooth, firm bed for the pipe.

PERMA-LINE® Pipe



LINE MATERIAL COMPANY
(a McGraw Electric Company Division)

LINE MATERIAL CO.
Milwaukee 1, Wisconsin

BSN-115

Name _____

Firm _____

Address _____

City & Zone _____

State _____

Please send me full information about Perma-Line pipe and name of nearest distributor.

☐ Architect ☐ Builder ☐ Dealer

NEW PRODUCTS

for further details check numbered coupon p. 272



- l. **Recessed room air conditioner** is installed vertically flush to wall between studs with piping concealed in floors or walls. Units can be installed on two-pipe balanced reverse systems, single or multiloop Mono-flo systems, single or multimanifold parallel systems. Each unit is 17¾" x 14" x 4¾". Price: about \$1,700 installed in average 5-room house, mid-Atlantic area.

Manufacturer: Westcott-Alexander, Inc.
Percoflash Ru Div.
Madison, N. J.



- m. **Prefab chimney** needs no foundation, can be hung from floor joists or ceiling rafters. Tubular sections are built up to roof height, where a patented chimney cap simulates a real brick chimney. Fittings are available for where the round sections pass through framing openings. Underwriter's Laboratories approved. Price: approximately \$100 installed.

Manufacturer: Van Packer Corp.
Bettendorf, Iowa



- n. **Surface-mounted wall heater** has concealed element under an anodized aluminum heating surface. Heater produces electrically radiant rays with a very low initial inrush of current over rated capacity, delivers full heat quickly. Wattage ratings are 1,250 and 750 for operation on 115, 208, 230 and 245 volts. Price: \$64 for 1,250 unit; \$52 for 750, plus installation. Recessed units also available.

Manufacturer: Marviray, Inc.
Newark, N. J.

continued on p. 211

NEW PRODUCTS

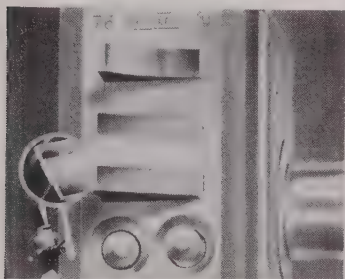
for further details check numbered coupon p. 272



- o. Steel windows in the Sampson Bros. Garden City project (p. 138)** were installed in one operation because of the integral *Fenestra Inside-Outside* trim. A continuous weathering fin around the entire unit is nailed to sheathing; inside, strap anchor clips fasten unit to studs.

Plaster stop on inside brick mold on outside of trim means it is possible to work right up to trim edge with neat, weather-tight joints.

Manufacturer: Detroit Steel Products Co.
Detroit 11, Mich.



- p. Nylon latch bolt insert** is self-lubricating, prevents metal-on-metal friction between bolt and strike. Test runs indicate longer life of nylon insert than conventional brass bolts, show too, great improvement in latching efficiency which makes for quiet closing. Standard on Sargent "7600" Series.

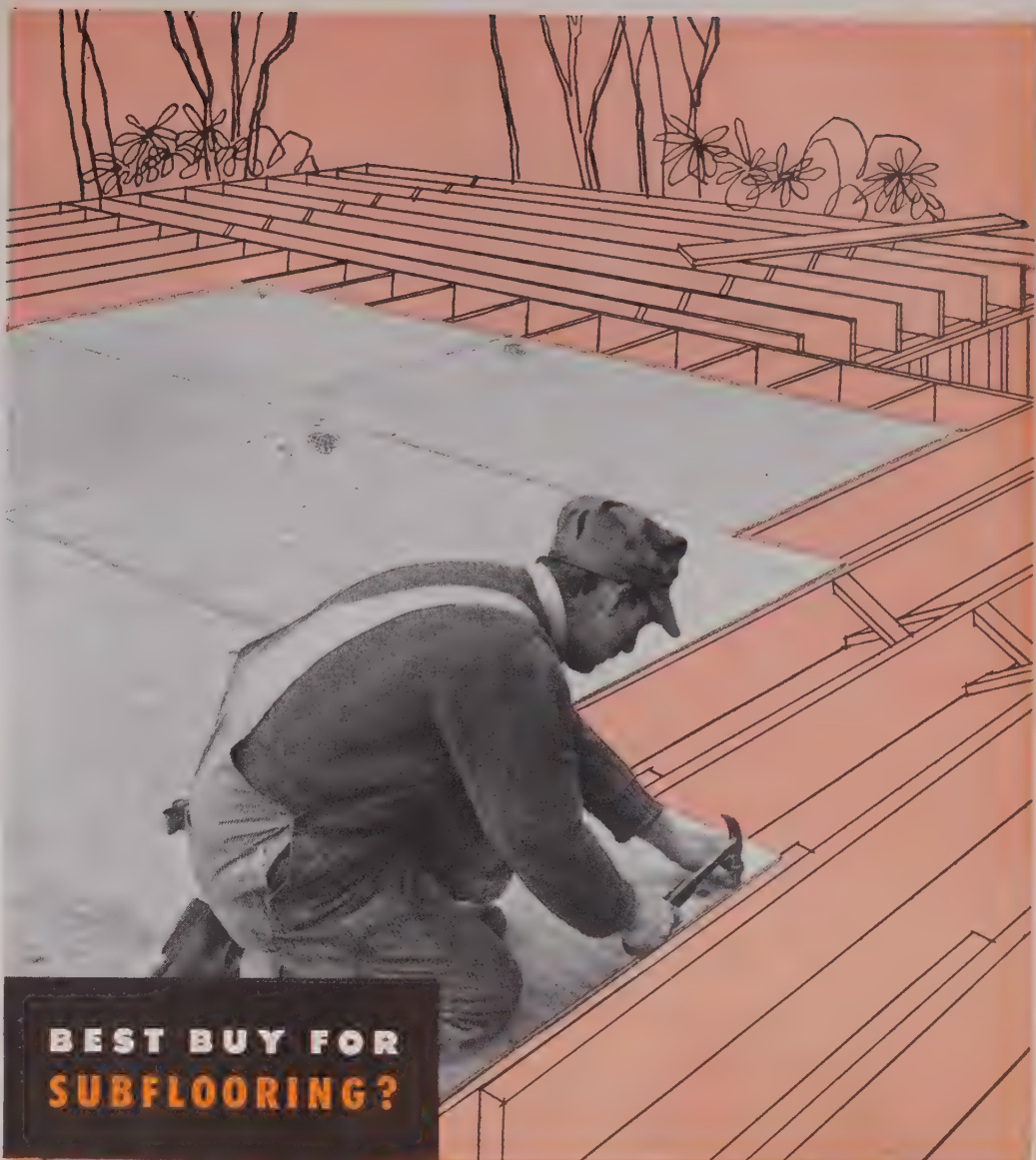
Manufacturer: Sargent & Co.
New Haven, Conn.



- q. Rain alarm** alerts home owners to close windows against impending showers. At the first drop of rain an electronic device in outdoor grid relays current that sets off buzzer alarm inside the house. Inside unit can plug into any AC outlet. Price: about \$9.95.

Manufacturer: Micro Moisture Controls, Inc.
Miami, Fla.

continued on p. 213

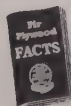


**BEST BUY FOR
SUBFLOORING?**

FIR PLYWOOD
of course!

here's why...

- 50% time and labor savings
- Adds strength and rigidity
- Strong, solid, squeak-free
- Fewer nails, less waste
- Won't warp, twist or cup
- Seals out drafts from below
- Fits standard joist spacing
- Large, light, easy-to-handle



FREE!
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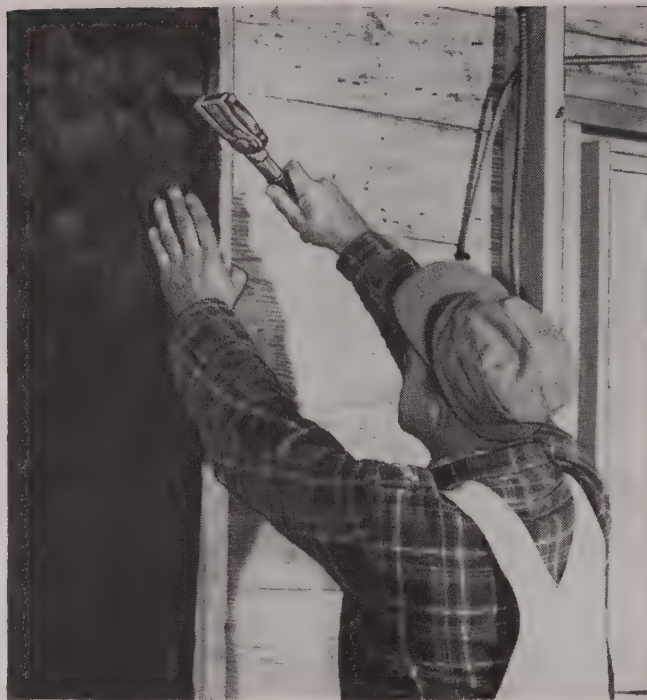
ALWAYS INSIST ON DFPA GRADEMARKS

DFPA grademarks are your guide, guard and assurance of plywood quality. Specify PlyScore grade for subfloor, wall and roof sheathing. Other grades for other jobs.





Best way to put up ceiling tile: Use a Bostitch T5-8 Tacker with Bostitch 9/16" or 1/2" staples. Press nose of tacker firmly into cove formed by tile flange. Squeeze the lever. You can drive three staples 4" apart in about three seconds and go on to next tile. You never mar the face of the tiles, and you can wear gloves to keep them clean.



Fastest way to apply insulation: Use either the Bostitch T5-8 Tacker or H2B Hammer, with Bostitch 3/8" staples. The hammer is faster with a little practice. You can drive staples with a flick of your wrist—*much* faster than hammer and nails. One hand is free to position the insulation. Available at your building supply dealer or local Bostitch office.

Install ceiling tile and insulation the way leading manufacturers approve

In co-operation with leading makers of ceiling tile and insulation, Bostitch has prepared a booklet which gives detailed instructions for installing these

materials. The following firms have contributed important information for this booklet and approve this method of installation.

Armstrong Cork Company	makers of Temlok® Tile, Temlok® Plank and Cushiontone®.
The Celotex Corporation	makers of Celotex Tile Board and Finish Plank and Celotex Regular and Reflective Rock Wool Blankets.
Infra Insulation, Inc.	makers of Infra Multiple Aluminum Thermal Insulation.
Minnesota & Ontario Paper Company	makers of Insulite Tile Board, Plank, and Interior Board.
National Gypsum Company	makers of Gold Bond Insulation Board Products and Rock Wool Insulation.
Reynolds Metals Company	makers of Reynolds Reflective Aluminum Insulation.
United States Gypsum Company	makers of Twin-Tile, Panel-Tile, Quietone, Auditone, USG Insulation Plank, and Red Top Insulating Wool.
American Sisalkraft Corporation	makers of Sisalkraft and Sisalation.
Wood Conversion Company	makers of Balsam-Wool and Nu-Wood Ceiling Tile.

FREE BOOKLET — SEND COUPON FOR YOUR COPY

BOSTITCH, 521 Mechanic Street, Westerly, R. I.

Please send me your free booklet describing the best way to install ceiling tile and insulation.

Name _____

Address _____

City _____

Zone _____

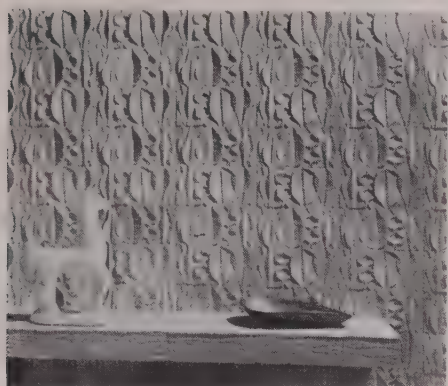
State _____

Fasten it better and faster with



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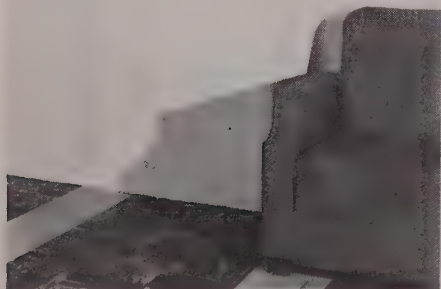
- r. **Sculptured tiles** for complete walls or panels, patios or pools are of glazed or unglazed waterproof clay in earth tones. Geometric designs or hieroglyphic patterns (like the one above) break up the sameness of plain walls, create light and shadow effects. Price: about \$3.80 per sq. ft. unglazed.

Manufacturer: Design Technics
New York, N. Y.



- s. **All-aluminum jalousie door**, 1" thick, has several features, including: concealed hinges, butt-type corners for maximum strength, recessed aluminum screens interchangeable with storm sash inserts. *Silver Jalousie* retails for about \$125, plus installation.

Manufacturer: Union Machine Co.
Kenilworth, N. J.



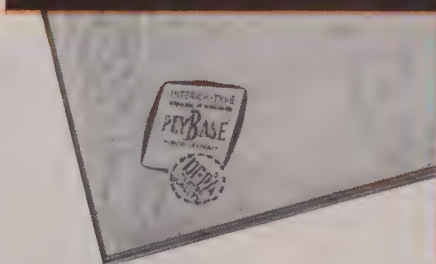
- t. **Paratex wall coating** with Devran is a masonry paint which resists water penetration through basement walls (though not through cracks). Manufacturer claims the paint wears well, has cohesiveness and uniformity, and is easy to apply. White and 14 colors. \$6 a gal.

Manufacturer: Truscon Laboratories
Detroit, Mich.

continued on p. 217



**BEST BUY FOR
UNDERLAYMENT?**



FIR PLYWOOD
of course!

here's why...

→ Smooth, solid; stays flat

→ Nails won't work loose

→ Makes floor coverings look better; no seams or ridges to offer points of wear

→ Easy to cut, fit, fasten

→ Dry! Won't shrink or swell

→ Cut costs by using as combined subfloor-underlay. Gives strength plus smooth surface



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DFPA grademarks are your guide, guard and assurance of plywood quality. Specify PlyBase® or PlyPanel® grades for underlayment. Other grades for other jobs.



Modern Maid . . .

combines **Antique Copper**
with **Wrought Iron Black**



- Easiest to Install
- Realistically priced for the builder
- One source for gas or electric
- Two-burner or four-burner tops
- Choice of ovens

In either sparkling stainless steel or non-tarnishing antique copper porcelain accented with wrought iron black, Modern Maid built-in ranges give you most for your money. You have a choice of three different ovens, two different top burner arrangements and optional griddle. Modern Maid offers one of the largest ovens in built-in ranges today, with fully automatic clock controls, automatic oven lighter and, as an added feature, a hood over oven vent to keep walls clean. Installation is remarkably easy! Fully guaranteed.

Tennessee Stove Works
CHATTANOOGA, TENNESSEE

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Chattanooga, Tennessee

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N A H B HOME SHOW,
CHICAGO

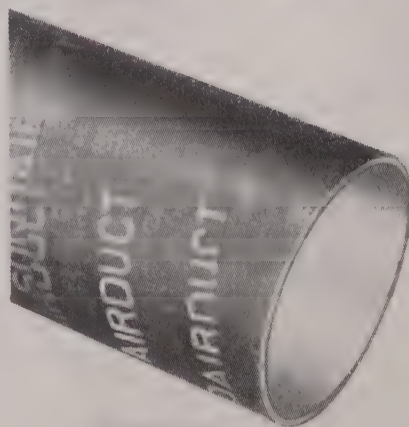


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all about money-saving



SONOAIRDUCT

Fibre



See the revolutionary, cost-cutting SONOAIRDUCT Fibre Duct for yourself! Made to comply with F.H.A. Minimum Property Requirements — and used and approved by builders and contractors everywhere.

One type for slab-floor gas and oil fired warm air perimeter heating systems, where the duct is encased in dense aggregate concrete — and another type for crawl, basement and attic space! 2" to 36" I.D., up to 50' long.

Duct

A copy of our newly-published SONOAIRDUCT Installation Manual is yours for the asking at our display space — or write for complete information.



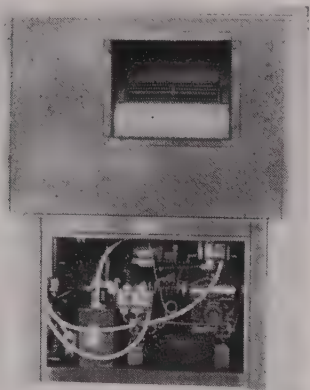
SONOCO
PRODUCTS COMPANY

CONSTRUCTION PRODUCTS DIVISION
HARTSVILLE, S. C. — MAIN PLANT

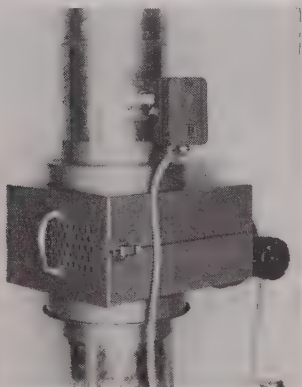
LOS ANGELES, CAL. 5955 SOUTH WESTERN AVE.
MONTCLAIR, N. J. 14 SOUTH PARK STREET
AKRON, IND. • BRANTFORD, ONT. • MEXICO, D. I.

NEW PRODUCTS

for further details check numbered coupon p. 272



- u. **DA air conditioner** switches from air- to water-cooling when outside temperature reaches 95°. In areas where water is high or costly, manufacturer says DA's dual condensers use less than 10% of the water required by conventional air conditioners, is equivalent in water saving to that of a cooling tower. Prices from \$1,702 to \$1,873. Manufacturer: Union Asbestos & Rubber Co. Chicago, Ill.



- Scotch heater** attaches to smoke stack, utilizes waste chimney heat by blowing excess heat to damp or drafty rooms. When stack temperature climbs above 350° F., thermostat-controlled blower sends warm air through specially brazed, hollow steel tubes to raise room temperatures by 10°-15°. 1/17 hp motor, 150 c.f.m. fan, 10½" x 14½" x 12", 40 lbs. \$149 retail. Manufacturer: Micro Scotch Heater Corp. Mineola, N. J.



- w. **Gas-fired forced warm air unit** gives even heat distribution by means of a thermodynamically balanced multi "Boiler Tube" *continued on p. 219*



**BEST BUY FOR
WALL SHEATHING?**

FIR PLYWOOD
of course!

here's why...

- Finest construction known
- Twice as strong and rigid
- Won't split or puncture
- Eliminates diagonal bracing
- 25% time and labor savings
- Ideal for shear walls
- Far less waste, fewer nails
- Solid, grips nails firmly

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TESTED QUALITY

INTERIOR TYPE
PLYANEL
TESTED QUALITY

PLYBASE
TESTED QUALITY

PLYFORM
TESTED QUALITY



▲ Mr. Fred Wohlert, Eastern Steel Sash Co., puts the finishing touches to one of the 24-light corner-angle living room windows. These windows measure 3'11" along one side of the angle and 4'11" along the other, and 4'9" high.

SEVEN reasons why STEEL WINDOWS

were selected for New York Housing Development

● Mr. Seymour Kaplan, superintendent for General Contractors, S.S. Silberblatt, Inc., lists the reasons why steel windows were chosen for the Forest Houses development. "First," says Mr. Kaplan, "their cost. Steel windows are definitely less expensive than windows of other materials. Second, ease of installation. Steel windows go in in no time. Normally a three-man crew would finish

an entire floor—56 to 62 windows—in four hours. Third, strength. Steel windows can take a beating; don't require kid-glove handling.

"Next," continues Mr. Kaplan, "we like their wearability. These steel windows will really wear; and are an important part of the complete fire-proofing program for the buildings. Fifth, storm-resistance. I've never heard of any storm damage to any steel windows. Sixth, repairs. On-the-job repairs are simple, inexpensive and few-and-far-between. And seventh, manpower. Steel windows require fewer manhours to install, and don't need highly skilled labor. With all these good reasons, it's no wonder we used steel windows," finishes Mr. Kaplan.

More and more steel windows are coming to be the first choice of architects, builders, property owners and managers for large jobs like this. For steel is the more sturdy, versatile material for window construction. No matter what type of building you are designing or specifying, there's a steel window that's just right for it.

For more than forty years United States Steel has been supplying window manufacturers with special rolled sections of high-grade open-hearth steel.



▲ Mr. Seymour Kaplan, superintendent, points out some of the 4,803 steel windows installed in the seven buildings in the Forest Houses, New York City Housing Development, Bronx, New York. Windows were fabricated by Hope Windows, Inc.; were installed by Eastern Steel Sash Co., sub-contractor.

Mr. Seymour Kaplan shows one completely assembled window just before installation. ▶



Look for this label—it is your assurance that the windows you buy are made from quality steel.

UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS STEEL FOR WINDOWS

UNITED STATES STEEL

NEW PRODUCTS

for further details check numbered coupon p. 272

heat transfer system and a tear-drop, air-foil design combustion chamber. Four door openings make for easy installation of cold air returns. Price: \$261.

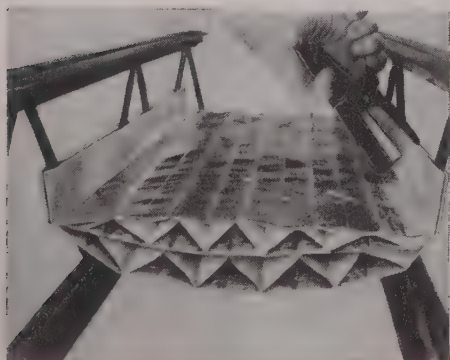
Mfr.: Roberts-Gordon Appliance Corp.
Buffalo 6, N. Y.

- x. **Flexi-Cool air conditioner** adapts well to limited space like that in attics, closets, garages. Sectional, flexible construction means unit can be positioned vertically or horizontally. The cooling cycle alone may be added to an existing furnace; assembled



as a unit it can be installed remotely with duct work extended to conditioning area. Conditioner provides 2 to 7½ tons of cooling at 2 to 7½ hp. Dimensions: 24" x 38" x 21" up to 39" x 43" x 26". No prices given.

Manufacturer: Worthington Corp.
Harrison, N. J.



- y. **Insulation blankets** of asbestos and aluminum for 16" and 24" joist centers reduce heat and vapor flow. This efficient, high temperature, thermal insulation is made of paper-thin flameproof asbestos sheeted by aluminum. Maker says that insulation can pass the most rigid fire regulations by forestalling the hazards of secondary ignition, often caused by overheating. Shipped flatly compressed, insulation expands on the job, staples into place for permanent attachment. It is prefabricated to open out automatically into multiple layers of air spaces, aluminum and fiber. Type 6AP, \$129 for 1,000 sq. ft. Type 4AP, \$80 for 1,000 sq. ft. Manufacturer: Infra Insulation, Inc.
New York 12, N. Y.

continued on p. 222

**BEST BUY FOR
ROOF SHEATHING?**

FIR PLYWOOD
of course!

here's why...

- Lower in-place costs (saves up to \$2.50 per square)
- 25% faster application
- Grips nails firmly—will not pull loose in high winds
- Strong; braces building
- ¾" panels on 24" centers meets FHA requirements
- Dry! Won't shrink or swell
- Ideal base for shingle, composition or built up roofing
- Far less waste, fewer nails

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You can profit by THE TREND TO ELECTRIC

There's no doubt about the fact that *Electric Ranges* help sell houses. The proof is right here for you in this chart. There are *three times* as many *Electric Ranges* in American homes now as there were ten years ago. Every day, more than 4,000 of these ranges are being installed. These figures prove that home buyers *want* *Electric Ranges*—show that you should install them in the homes *you* build!

"We are both custom and operative builders, specializing in small houses," says Mr. Kenneth N. Plencner of Banker Builders, 7714 W. Touhy Ave., Chicago, Ill. "The homes we build vary in many details, but are alike in one respect—they all have *Electric Ranges*. The reason for this is that our customers want this kind of range, and we're in business to satisfy them." This 3-bedroom, 1½-bath house has large living-dining room, 2 fireplaces, and a finished basement. The kitchen is modern in every respect—including electric refrigerator, food waste disposer—and the range, of course, is **ELECTRIC!**



Today, successful builders are using foresight and imagination in planning the kitchen. Its equipment, its layout, have changed so radically that it *must* include the *Electric Range*. In the modern kitchen, cooking must come out of the "chore" class and become an automatic pleasure. That's

the kind of cooking the *Electric Range* provides. It's clean, saves time and effort, keeps the kitchen comfortably cool—and fits in with the modern idea of this room being a gathering place for the family. It's the range that can help sell *your* houses!

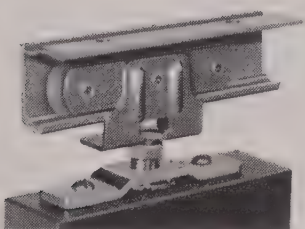
ELECTRIC RANGES help sell houses



YALE RESIDENTIAL HARDWARE

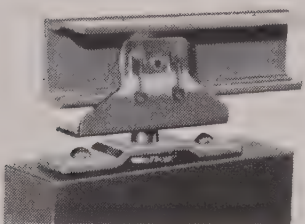
New sliding door hardware

accommodates more doors with less inventory



De Luxe Series

for 2, 3 or 4 by-passing doors. Double nylon wheels with permanently-lubricated bronze bearings glide on solid aluminum track. Mount on top or side of door with single or double track. Escutcheon or finger pulls, door stops and satin-finish aluminum guide strips included.

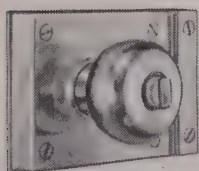


Costsaver Series

gives extra, space-saving convenience at budget prices. Use with single or bi-parting doors with or without wall pocket. Quiet single nylon wheel with permanently lubricated bronze bearings glides on extruded aluminum track. Escutcheon and finger pulls, door stops and aluminum guide strips also available.

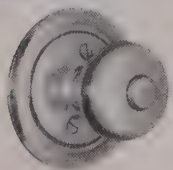
Now—make the whole house a Yale Job

Designed to Complement Each Other



5300 SERIES CYLINDRICAL LOCKSETS FOR EXTERIOR DOORS

Offers single-key convenience in 4 distinctive basic designs, 8 escutcheon patterns and 3 metals; gleaming brass, brushed bronze and satin-finished aluminum. Famous Yale security.

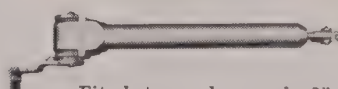


5200 SERIES TUBULAR LOCKSETS FOR INTERIOR DOORS

Single-key convenience in brass or aluminum with 5 decorative escutcheons. Push-button locking, famous Yale quality, pin-tumbler security—all priced to fit your budget.

Complete line of Screen Door Closers

506 AIRLINER CLOSER



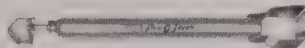
Fits between doors only 2" apart. Accessible adjustment screw. Spring mechanism sealed from dust and moisture.

570 LIQUID DOOR CLOSER

Smooth, steady action with simple thumb turn regulation.



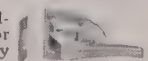
507 PNEUMATIC CLOSER



Slim, rugged design at low price. No exposed parts. Installation is done in a matter of minutes with only a screwdriver.

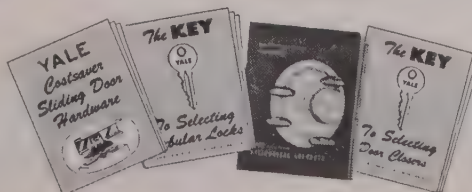
1011 PUSH-PULL CATCH

Easily installed on screen or storm doors by drilling only one hole. Easy action, secure closing. A home-owner's delight.



**Write today for free, handy booklets on
Sliding Door Hardware, 5300 and 5200 Series
Locksets, Yale Screen Door Closers. Address:**

**THE YALE & TOWNE MFG. CO.
LOCK & HARDWARE DIV., WHITE PLAINS, N. Y.**



YALE & TOWNE

YALE REG. U.S. PAT. OFF.

NEW PRODUCTS

for further details check numbered coupon p. 272



- z. **Swimming pools** of any size are built by US Steel's American Bridge Div. (This apparently unrelated grouping resulted from AmBridge's experience with steel in bridges and buildings exposed to the weather.)

All construction steps are included in the pool installation price, from excavation of the selected site, to the final painting of the interior surface. Filtration and chlorination equipment, as well as piping, concrete deck, and all plumbing are included.

Steel sections, of copper bearing steel, are cut shaped and welded in the fabricating shop, then shipped to the pool site for final placement and permanent welding. All weld beads on the inside surface are ground flush before painting. Exteriors are protected by a coating of bituminous mastic paint, and the interiors by a paint selected by the owner.

First installation of these pools was ten years ago, and a decade of use has brought no deterioration. With each pool goes a one year guarantee in writing, and the fabricators claim the pool should last indefinitely if properly installed and maintained. Private pools range from 20' x 40' to 20' x 60', and regulation pools are made to fit almost any need. Prices start at \$9,229, and go to \$44,217 (35' x 105').

Manufacturer: American Bridge Div.
US Steel Corp.
Pittsburgh 30, Pa.



- aa. **Perimeter baseboard heating and cooling** features a self-contained heat-trap running the entire length of the unit. The angle of discharge or throw is calculated to blanket the cold areas without streaking walls. Perim-O-Therm's design assures an even blanket of warmth on outer walls and window areas, sends a flow of warm air along entire panel opening. Slip lock construction makes installation fast and simple. Clean lines of the unit will blend into any room design. Price: approximately 80¢ per ft. Manufacturer: Flangeklamp Corp.
Buffalo, N. Y.

continued on p. 224

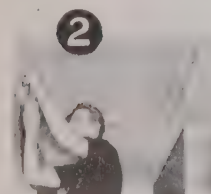


"WE USE THIS LOW-COST COOLING TO CLOSE THE SALE!"

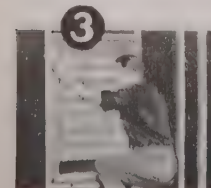
says Builder L. E. Hoppes
Hoppes Development Company
Springfield, Ohio



Fan and shutter arrive set up. Simply place fan over framed ceiling opening. Rubber cushion makes it self-sealing!



Complete automatic shutter unit screws to ceiling opening frame; flange forms trim. No finishing needed.



Ready-made attic louvers can be installed quickly by one man. Sizes for each of various-sized fans.

Mr. Hoppes writes: "You'll be pleased to hear that your R & M 'Package' Attic Fan has done more to close sales of our homes than any other 'extra' we've seen. The mere mention of complete built-in cooling is impressive. And it's a real pleasure to turn on the fan and get such an enthusiastic reaction every time. It really does cool every room in the house! We've installed these fans in 100 homes thus far, and have ordered 100 more."

Build this sales talk into your homes! Promise cool sleeping, cool living, for as little as \$145.00 list, complete with automatic ceiling shutter! Requires only 18" attic clearance; fits narrow hallways. 5,000 to 16,000 CFM. Available with or without automatic ceiling shutter. Fan guaranteed 5 years; motor and shutter, 1 year. Mail the coupon for our reliable guide to better comfort cooling!

ROBBINS & MYERS



"Package"
attic fans

free
booklet!

ROBBINS & MYERS, INC., Fan Division, HH-16
387 S. Front St., Memphis 2, Tenn.

Please send me your booklet, "R & M Comfort Cooling and Ventilating A. I. A. File No. 30-D-1."

Name _____

Address _____

City _____ Zone _____ State _____

100,000 FEET OF CLAY PIPE INSTALLED

in new Denver Housing Projects



More than 100,000 feet of Vitrified Clay Pipe have been installed in Denver projects by Westcraft Homes within a single year. Over the past three years, Westcraft has built more than 1,000 homes in this area, and thousands more are in construction or on the drawing boards—with Vitrified Clay Pipe specified *exclusively* for house connections and sewer mains.

Clay Pipe is first choice for house connections and laterals because it can't rust or corrode—can't be affected by acid sewer gases. Household detergents never weaken it, so it doesn't "oval" or squash out. Today's longer, stronger Clay Pipe is better than ever, thanks to the industry's new research program. It's true to dimensions, easier to joint, and backed by a 50-year guarantee.

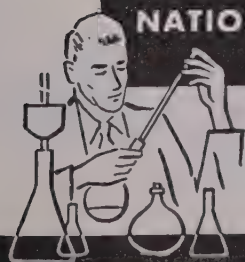
Vitrified

CLAY



PIPE

C1151-1



NATIONAL CLAY PIPE MANUFACTURERS, INC.

1820 N. Street, N.W., Washington 6, D. C.

206 Connally Bldg., Atlanta 3, Ga.

100 N. LaSalle St., Rm. 2100, Chicago 2, Ill.

703 Ninth & Hill Bldg., Los Angeles 15, Calif.

311 High Long Bldg., 5 E. Long St., Columbus 15, Ohio

Progress in Public Health - Through Clay Pipe Research



The "Carrollton" by New Century Homes, Incorporated, Lafayette, Indiana — primed and finished outside with Arco Exterior Primer and Arco Alkyd House Paint.

ARCO Paint Beauty Stimulates Our Sales...

KENNETH G. HORTON, President,
K. G. Horton and Sons, Inc., Anderson, Indiana

Kenneth G. Horton, New Century Homes builder in Anderson, Indiana, reports: "We use Arco paints because they are durable and our painters find them smooth and easy to apply. The beauty of Arco paint is stimulating to our sales."



Mr. Horton is typical of builders everywhere who are unanimous in their praise of Arco Alkyd House Paint and Arco Exterior Primer.

ARCO EXTERIOR PRIMER — a neutral

says New Century Builder

gray protective coating applied at the New Century factory is both decorative and long-lasting—completely sealing and preserving quality structural materials for months—until final coat can be applied.

ARCO ALKYD HOUSE PAINT — dries rapidly. In only four hours it may be re-coated . . . doesn't raincoat if showers interrupt painting.

Built-in resistance to mildew, moisture and other destructive elements—helps older homes keep that "new look" in any climate. Arco Alkyd House Paint colors resist fading . . . they defy wind and weather . . .

remain bright and sparkling for years. Eye-catching accent trims and subdued background shades put house hunters in a buying mood.

It's no wonder that builders applaud these revolutionary new paint products. Why not let Arco help solve your painting problems? For further details mail this coupon or write today.



USED ON

NEW CENTURY Homes

(2) TEXTURE WALL FINISHES

(3) ALKYD FLAT WALL PAINTS

(4) ALKYD INTERIOR ENAMELS

(5) MASONRY PAINTS

(6) DUM DUM Non-Shrinking CALK

THE ARCO COMPANY

7301 Bessemer Avenue

Cleveland 27, Ohio

(1) (2) (3) (4) (5) (6)

☐ Please send technical information on products checked above.

☐ Please ask your Arco Specialist in this territory to call.

NAME _____

COMPANY _____

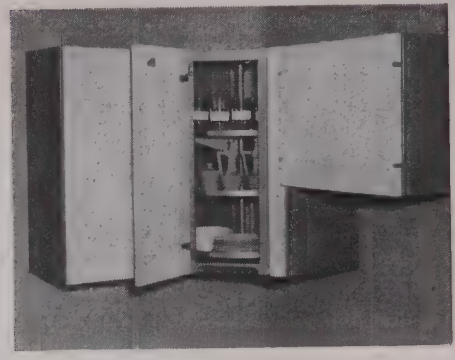
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CITY _____ STATE _____

continued from p. 222

NEW PRODUCTS

for further details check numbered coupon p. 272



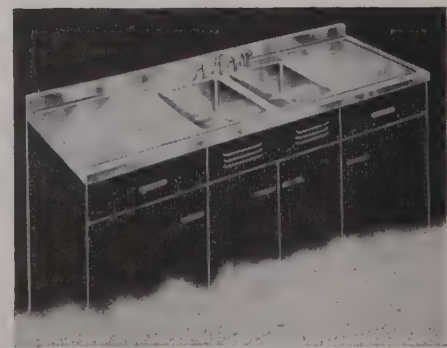
bb. Corner wall cabinet adds extra space to small kitchens, eliminates groping by using three big revolving shelves which bring objects to hand (and sight) immediately. Back corner of the cabinet is squared off to make installation easy even when walls are not true. Dimensions: 30" high, 24" along each wall. Shelves are spaced 9 1/4" x 7 1/2" x 7 1/2" top to bottom. In white enameled steel, \$60.27; wood-copper-steel, \$67.50.

Manufacturer: American Kitchens Div.
Avco Manufacturing Corp.
Connersville, Ind.



cc. Garage door operator works by means of push-button controls located at house or entrance to driveway. *Rich-Wil 98 Electric Operator* comes complete with track, two controls, wire for installation, \$78. Optional extras: key switch and dashboard radio controls.

Manufacturer: Rich-Wil Div., Richards-Wilcox Mfg. Co.
Aurora, Ill.



dd. Stainless-steel sink tops are fully welded, all-of-a-piece for high strength and durability. Sinks have anti-splash rims, drainboards are double pitched to bowl to provide drainage without creases or grooves. Tops come with wood frames to facilitate

continued on p. 228

Pella[®]

MULTI-PURPOSE WINDOWS

- New, all-aluminum Underscreen Sash Operator
- Pin-and-Socket device locks windows in many positions between fully open and fully closed
- All hardware of stainless steel and aluminum
- Now a total of 14 fixed and ventilating sizes combine into hundreds of interesting window arrangements
- Alternate all-aluminum screens now available at slight extra cost
- New Nylon Operator Guide... wear resistant, quiet, needs no lubrication



Pella[®] MODELS"



Mail coupon
for folders

ROLSCREEN COMPANY • PELLA, IOWA

ROLSCREEN COMPANY, Dept. H-1 Pella, Iowa

Gentlemen: Please send free folders on Pella...

- | | |
|---|--|
| <input type="checkbox"/> Wood Folding Doors | <input type="checkbox"/> Multi-Purpose Windows |
| <input type="checkbox"/> Casement Windows | <input type="checkbox"/> Venetian Blinds |

FIRM NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

ATTENTION MR. _____

NEW PRODUCTS

for further details check numbered coupon p. 272

fastening to cabinets. Single or double bowls and drainboards are available in 15 stock sizes. Prices range from \$139 for 42" single bowl and drainboard, to \$253.35 for 96" double bowl and double drainboards. Manufacturer: Just Manufacturing Co. Franklin Park, Ill.



ec. **Folding closet door** comes in four panels, hinged in pairs to fold back for widest possible access. It is almost a direct descendant of the familiar telephone-booth door action. Nylon pivot bearings and guides afford smooth gliding action; simple steel design harmonizes well with interiors. Unit is manufactured in 3', 4' and 5' widths in 6'8" and 8' heights. When doors are open, 4' unit projects only 7" into the



room, which means extra space savings in the room since doors interfere so little with placement of furniture. Door can be decorated too, since units are available in flat prime gray finish to which paint or wall-paper can be applied. The 6'8" unit is also available in birch finish. Installation is easy, requires only a screw driver. Prices: from \$31 to \$35.50 depending on size, finish.

Manufacturer: The American Welding & Manufacturing Co. Warren, Ohio

continued on p. 234



Chelsea

Power Vent

KITCHEN FANS

Complete line . . . for wall or ceiling . . . and packed with sales and installation features! 8" and 10" fans, for pull chain or wall switch operation. Baked white enamel or "super-chrome" grille.

NEW . . . INSTALLATION FEATURES!

Cut installation time and expense by 50%! "All-size" sleeve fits all walls from 4" to 14". New mounting tabs . . . adjustable mounting straps simplify installation — eliminate carpentry work.

NEW . . . OPERATING FEATURES!

Counterbalanced shutter stops back drafts and flutter. One-piece motor support for quiet operation. All-weather hood keeps outside walls clean — operates with chain or wall switch.

NEW . . . LOW PRICES!

Priced low — within the reach of any project! Precision built and guaranteed for 5 years.

WRITE . . . for information, or see your nearest Chelsea distributor.
CHELSEA FAN & BLOWER CO., INC.
PLAINFIELD, NEW JERSEY



Chelsea

Deluxe

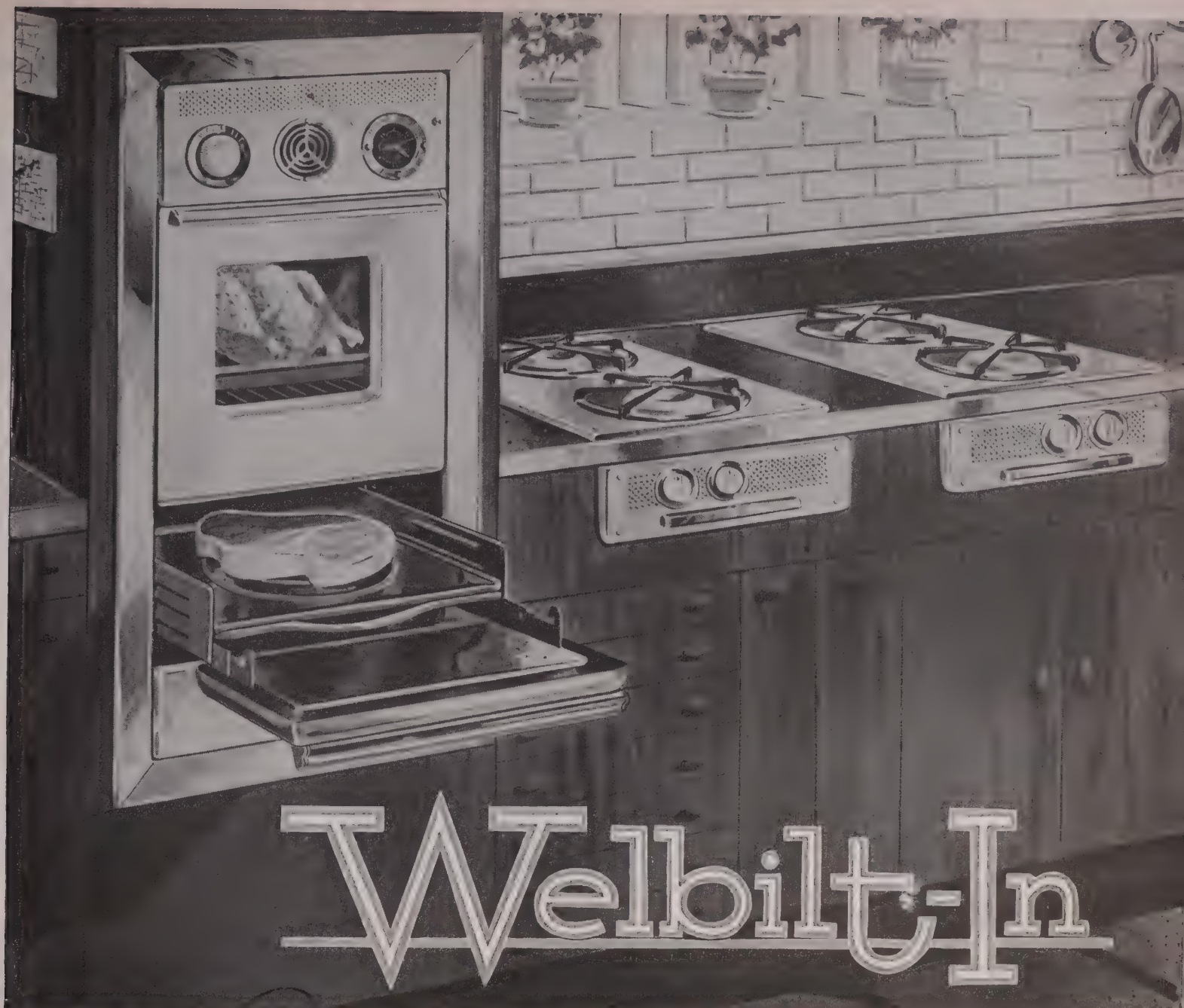
ATTIC FANS

Every home — new or remodelled — needs the added luxury of complete summer comfort and healthful year-round ventilation — with a Chelsea deluxe attic fan. Low cost Chelsea attic fans are easy to install . . . 26 different models for wall and ceiling installation meet every home ventilating requirement. Plan today to "comfort condition" your homes, cut cooling costs — with Chelsea!

CUT THE HIGH COST OF COMPLETE HOME COOLING!

Reduce complete home air conditioning costs! When hot, stagnant air is flushed from attic spaces, the size of the required air conditioning system is reduced by up to 40%! It's the economical combination for efficient home air conditioning — use a Chelsea deluxe attic fan. An attic fan will ventilate the entire house too! It draws fresh air into every room . . . expels hot, stale air through attic vents — changes all the air in the house every minute!

WRITE . . . for information, or see your nearest Chelsea distributor.
CHELSEA FAN & BLOWER CO., INC.
PLAINFIELD, NEW JERSEY



Welbilt-In

Gives builders **MORE FOR THE DOLLAR** *by far*

Much more in glamor, design, features too! Welbilt-In brings you the 'new look' that helps close sales quickly. It's the stand-out luxury built-in range designed to fit quickly and economically into all standard kitchen cabinets. *Nobody knows builders' requirements better than Welbilt.* From Maine to California, with big and small builders, Welbilt outsells all other ranges.

WELBIT-IN—YOUR CHOICE OF GAS OR ELECTRIC WITH IDENTICAL DIMENSIONS

Wall oven-broiler—Easily placed at the height most convenient for no-stoop, easy reach broiling and baking. • Luxurious exterior finish in satin chrome or new "coppertone" porcelain enamel to match every custom kitchen decor. • Kleer-View Oven Window and Light, electric clock, 4-hour minute minder.

Dimensions: Gas and Electric Oven-Broiler
Height 37½" • Width 20¾" • Depth 23¼"

Counter cooking unit—Choice of two burner units or space saving cluster of 4. • Luxurious satin chrome finish to complement every counter top and cabinet. • Easy to clean. Removable drip pans . . . designed to catch spill-overs.

Dimensions: Gas and Electric Top Cooking Unit
2 burner unit cutout 18½" x 12¼"

Approved by American Gas Association for use with Natural, Manufactured, LP Gas

Write For Full Details: Welbilt-In Division HH Builder's Models start at \$132.50 complete
Welbilt Corporation, Maspeth 78, N. Y.

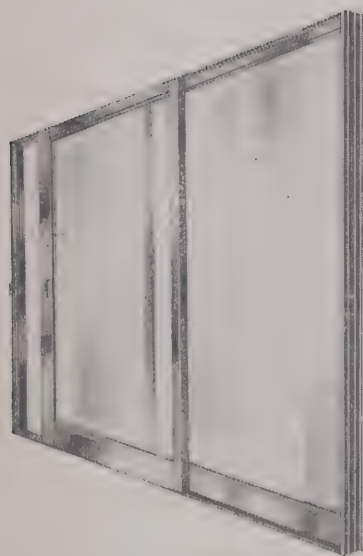
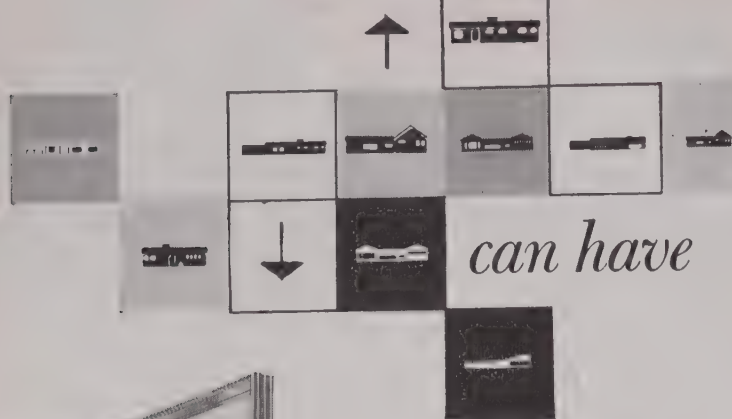
AMERICA'S LARGEST RANGE SUPPLIER TO THE BUILDING INDUSTRY

Welbilt CORPORATION

Manufacturers of Welbilt Gas Ranges, Electric Ranges, Air Conditioners
Detroit-Jewel Gas Ranges, Electric Ranges, Gas Incinerators
A-B Gas Ranges, Electric Ranges, Gas Incinerators
Garland Commercial Cooking Equipment

Executive Offices and Eastern Mfg. Div., Maspeth, L. I., N. Y.; Midwest Mfg. Div., Detroit, Michigan

now *EVERY* home *you* build



All Aluminum, Sliding Glass Doors AS LOW AS

\$9000*
LIST PRICE

Sun Valley "jr." Sliding Doors designed, built, priced especially for low budget and multiple housing installations

Whether you are building 1 or 100 homes... price no longer restricts you from including aluminum sliding glass doors. Here is the ultimate in sliding doors... LOW COST combined with MAJOR FEATURES usually found only in higher priced doors.

You can specify Sun Valley jr. without budget fears. It's priced especially for the economy budget minded.

This is the door both builders and architects have been looking for. It's SLIM and TRIM... rugged construction with built-to-last quality. Check these list prices... see how easily Sun Valley jr. can be included in your building plans.

Prices on Sun Valley jr. Door

**QUANTITY
DISCOUNTS
AVAILABLE**

DOOR WIDTH OPENING	LIST PRICE
6'-0" (2 panel).....	\$ 90.00
8'-0" (2 panel).....	102.00
10'-0" (2 panel).....	114.00
12'-0" (2 panel).....	126.00

All doors 6'-8 1/4" high

*for 6 ft. wide, 2-panel door without glazing.

Features of Design and Construction.

- locking stiles may be reversed permitting sliding unit to be right or left.
- units will accommodate glass of 3/16", 7/32" or 1/4" thickness.
- comes complete with full jamb.

plus features

BALANCED DESIGN... ALUMINUM EXTRUSIONS...
FULLY WEATHERSTRIPPED... EASY INSTALLATION...
...NO MAINTENANCE

For added value for your homes, see your Sun Valley dealer now or write direct to:

**Sun Valley SLIDING DOOR COMPANY, Dept. 204,
8354 San Fernando Road, Sun Valley, Calif.**

continued from p. 228

NEW PRODUCTS

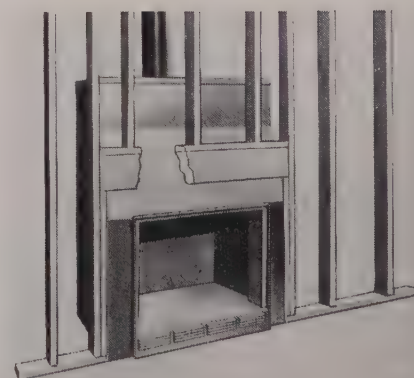
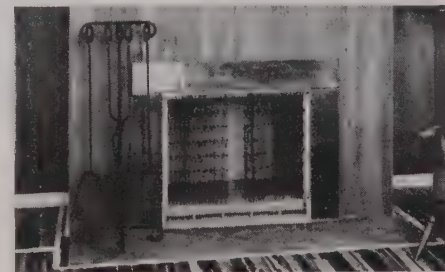
for further details check numbered coupon p. 272



ff. Central built-in cleaning system does not use conventional pull-as-you-go machine. *Vacu-Flo* tank can be wall-mounted in garage, basement; only equipment you see are plug-in hose, tools. Inlet valves to tank can be located through house for easy access. Hose, tools have 25' of reach, weigh 5 1/2 lbs. \$220 depending on house size.

Manufacturer: H-P Products, Inc.
Vacu-Flo Div.
Louisville, Ohio

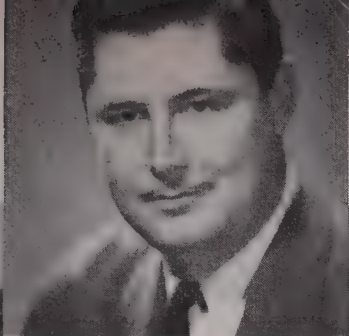
gg. Thulman fireplace and chimney is complete all-in-one unit. Both fireplace and chimney operate on "thermo-siphon" principle of air circulation which manufacturer claims provides ample insulation by putting two air spaces between central flue and outer casing. Metal flue protects against acids, heats rapidly to establish draft as soon as fire is lighted. Pre-packaged chimney comes in lightweight sections, easy to install. Metal chimney top housing looks like wire-cut brick, has extension resem-



bling a flue tile which gives rain protection and increased draft. Tops are made in three sizes: standard, deluxe rectangular, and double deluxe rectangular. Fireplace carries Underwriters' Laboratories label. Complete unit for 1-story house, about \$325.

Manufacturer: The Majestic Co.
Huntington, Ind.

continued on p. 240



Donald J. Scholz, originator and manufacturer of the famous Scholz California Contemporary Homes.

1956 Scholz Homes will feature **WESTINGHOUSE APPLIANCES**



SPECIAL TRANSPORTATION TO SCHOLZ HOMES

Regularly scheduled special transportation service from the Conrad Hilton and Sherman Hotels will take you directly to the Scholz model homes location shown here.

SEE THE WESTINGHOUSE BUILT-IN APPLIANCES

*at the special exhibit of new Scholz Model Homes during
the Chicago NAHB Show*

Nine new Westinghouse-equipped Scholz Homes in Nathan Manilow's famed Highland Park Subdivision, Highland Park, Illinois are open for your inspection anytime during the NAHB Show, January 22nd through 26th. See the Scholz *Cherry Hill*, the *Highlands*, the *House and Garden*, the *Westchester*, the *Lincolnshire*, the *Imperial Woods*, the *Young Modern B Deluxe*, the *Country Club*, and the *Rocky River A Deluxe*.

Glamorous Westinghouse Appliances, including built-in ranges and undercounter dishwashers, will be featured in these homes.

The famous Westinghouse name . . . the quality and dependability of the products, and the realistic Westinghouse service policy were the deciding factors in Mr. Scholz's selection of Westinghouse Appliances.

YOU CAN BE SURE...

IF IT'S

Westinghouse

**WESTINGHOUSE ELECTRIC CORPORATION
MAJOR APPLIANCE DIV., MANSFIELD, OHIO**

VISIT BOTH WESTINGHOUSE EXHIBITS AT THE NAHB SHOW

In spaces 88-93 at the Conrad Hilton, you'll see exciting and practical ideas in the use of color, in built-in appliance design and in kitchen planning. In space 895 at the Coliseum, you'll find new air conditioning and furnace equipment plus new low voltage, multi-control wiring systems by Bryant.



Beuti=Dor

Glass and Aluminum TUB ENCLOSURE

Costs so little-Adds so much!



Here is a truly "modern" bathroom. Yet, look at the exciting difference BEAUTIDOR makes by transforming the tub into a glamorous glass enclosed shower bath...



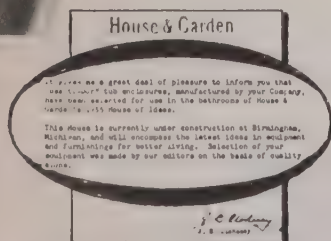
"Criterion" recessed tub by Crane Co.

TO SELL HOMES FAST . . . GIVE YOUR BATHROOMS

Sales Appeal that Stands Out!



**Bathe and Shower
in safety
BEAUTI-DOR glass
is twice as thick!**



Style!

Chosen by the editors of "HOUSE & GARDEN MAGAZINES" for the bathrooms of the famous "1955 HOUSE OF IDEAS."



Nationally Advertised!

BEAUTI-DOR gives you "brand name" appeal — so important in today's selling!

Your bathroom can be your best salesman! Let BEAUTIDOR transform your tubs into luxurious, glass enclosed shower baths and you'll create instant, irresistible sales appeal!

Your Prospects Want Beauti-Dor's Comfort and Convenience! Glamorous translucent glass doors, framed in gleaming rust proof aluminum, roll silently . . . effortlessly. Shut out drafts and shivers; keep spray and splash inside the tub — no wet, slippery floors to mop. Always neat — no messy curtain to launder or replace — doors wipe clean in a jiffy!

Beauti-Dor Offers You More in Every Way!

BEAUTI-DOR comes completely assembled — shipped in one carton — remove it and install. Even the exclusive pattern, 7/32" thick glass is sealed in door panels in rubber tight, Buna-S channels — ready to glide on double, overhead ball-bearing cadmium plated rollers.

Beauti-Dor Increases Your Home Value — Raises Evaluation!
Not only will BEAUTI-DOR help you sell, but you'll find local evaluation will more than make BEAUTI-DOR worth your while! Write for details.

\$74.95
LIST

4½ - 5 ft. size.
Slightly higher West of
Rockies

SEE BEAUTI-DOR AT THE N.A.H.B.
SHOW BOOTH 511 — SHERMAN

**BUILDERS...
WRITE FOR SPECIAL PRICES**

SHOWER ENCLOSURES, INC.

1227 WEST DEVON AVE., CHICAGO 40, ILL.

Gentlemen: Please rush me the BEAUTI-DOR story, without obligation,
and all details of America's leading Tub Enclosure.
I am a ☐ Builder ☐ Dealer ☐ Distributor

Name _____

Company _____

Address _____

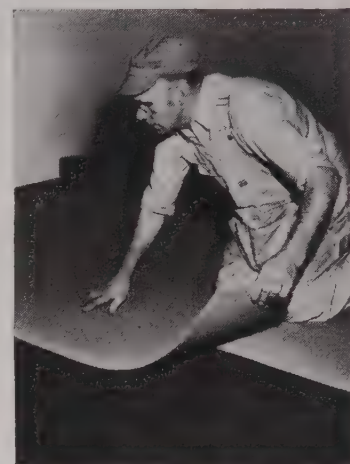
City _____ Zone _____ State _____

City _____ Zone _____ State _____

NEW PRODUCTS

for further details check numbered coupon p. 272

hh. Cork-Tex underlay is designed for use under resilient hardwood floors in gymnasiums, offices, factories, schools and houses. Cork-Tex is laid on concrete, on grade or on suspended floors, and helps keep impact shock, noise reflection and transmission to a minimum. Available in



sections, it can be easily installed; $\frac{1}{4}$ " and $\frac{1}{8}$ " thicknesses make for fast handling. Depending upon freight costs, Cork-Tex can be installed for about 13¢ to 15¢ per sq. ft.; $\frac{1}{8}$ " thickness, recommended with flexible tile, costs about 10¢ per sq. ft. to install.

Manufacturer: Continental Can Co., Inc.
New York 17, N.Y.

ii. **One-man vibrator** vibrates concrete by use of a powerful motor inside the vibrating head, eliminating outside engine which required a second workman to carry. To operate, plug in electric extension cord to 115 v. AC or DC outlet or generator, drop vibrator head into concrete and guide it. Casing acts as a handle. When job is finished, vibrator rolls up like a hose. If



motor becomes overheated, safety thermostat in head shuts off vibrator, restarts when cool. Lightweight casing carries electric wires back to cable. Out-off switch 7' from head is entirely covered. All moving parts are sealed, can be immersed in concrete. According to manufacturer, oiling and greasing are unnecessary. Compact unit weighs 25 lbs., costs about \$300.

Manufacturer: Master Vibrator Co.
Dayton, Ohio

continued on p. 246

KENTILE, INC.

America's Largest Manufacturer of
Resilient Floor Tiles

Cordially Invite You to Attend an
Exhibition Showing of their Entire Line

at the **NAHB SHOW**

Chicago Coliseum

15-13 So. Wabash St.

Chicago, Ill.

Booth 899

Jan. 22 to 26

NEW PRODUCTS

for further details check numbered coupon p. 272



"CHAMP" Forms with cross members on 24" centers, being erected for house foundation in Skokie, Illinois. Contractor, Harding Bros., Northbrook, Illinois.

New Design Lowers Form Cost It's SYMONS New "Champ" Form

The new Symons "Champ" Form brings to the builder an efficient and accurate form at a cost approximately 20% less than Symons Standard Panel Form. Although designed for light, commercial and residential construction, contractors report the "Champ" is equally satisfactory for use on high pours.

CONSTRUCTION FEATURES

The panel has a 2 x 4 frame with 2 x 4 cross members that lay flat against 3/4" plywood face. Cross members are placed on 12" or 24" centers depending on whether forms are to be used for residential or commercial construction. Pressure against form is transmitted directly to tie through rail plates which are located at each end of cross members and attached to frame.


INTERCHANGEABLE FEATURE

"Champ" Forms are made in the same sizes as Symons Standard Panel Forms—2 ft. wide, and 4', 6' or 8' long. Special sizes will be made to order. The hardware and ties used on Symons Standard Panel Form are also used on the "Champ" Form. This makes it possible to use Symons Standard and "Champ" Forms interchangeably.

FREE ENGINEERING SERVICE

Our engineering staff is experienced with all types of forming and will furnish complete form layouts and job cost sheets on your form work—at no charge or obligation. Our salesmen give advice on form erection, pouring and stripping methods. Builders throughout the country use this service to their benefit and profit.

Rentals—"Champ" Forms may be rented with purchase option—all rentals to apply on purchase price.



Symons

SYMONS CLAMP & MFG. CO.
4277 Diversey Ave., Chicago 39, Ill. Dept. A-6

Please send complete information on Symons "Champ" Forms.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

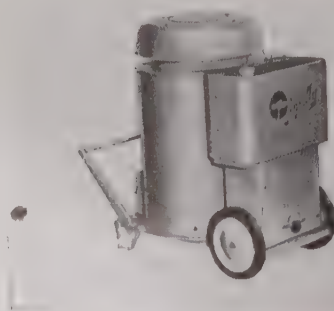
- jj. All-aluminum water heater has a rust-proof, chipproof, nonflaking tank which needs no anodic protection. *Alumilux* stores water at 180°, features an accessory mixing valve to adjust tap water to any temperature desired. Minneapolis-Honeywell controls are automatic with snap action.



conveniently located. Magnetic safety control shuts off all gas to main burner and to pilot in case of pilot outage. Tank capacities run from 20 to 50 gals. Models come in either embossed aluminum jacket or enamel finish. Tanks insulated with over 2" of Fiberglas between flue liner, outer jacket from heater top to base. Prices competitive with other models in the field.

Manufacturer: Clayton & Lambert Mfg. Co.
Louisville, Ky.

- kk. Portable heater is designed for small heating jobs, rolls to the job, indoors or out, and, by means of canvas ducts, can spot heat where desired. Fired with ordinary fuel oil, *Thrifty* heater will burn gasoline when outdoor temperatures fall below firing range of fuel oils. Heating capacity is manually controllable from 50,000 to 170,000 Btu's per hour. Heated, ventilated air is dis-



charged under pressure by means of an electric motor-driven blower. Safety devices guard against overheating, power and flame failure, etc. Combustion gases can be separately vented to outdoors whenever safe practice requires. Heater is guaranteed to operate continuously for 18 hours maximum without refueling.

Price: about \$300.

Manufacturer: American Air Filter Co., Inc.
Louisville, Ky.

Technical Publications on p. 252

the difference
between
this



and this



... could be —

BROWN'S Super Cedar

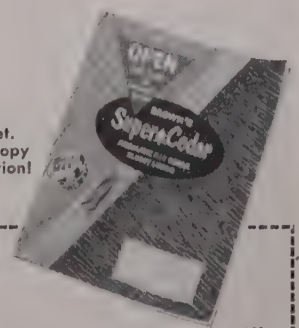
CEDAR-LINED CLOSETS

... because SUPERCEDAR enables you to include the saleable beauty and protection of genuine aromatic red cedar closets for little or NO MORE than ordinary plaster! SUPERCEDAR installs quickly over open studding or over old wood or plaster.

SUPERCEDAR is 90% Red Heart wood with 100% cedar oil content (smells — but good!). Available in 4 and 8 foot factory-sealed bundles, and in prebuilt 10" to 18" panels, 8 feet long. Sold by building supply dealers everywhere!

FREE

Closet Planning Booklet.
Write today for your copy
and complete information!



GEO. C. BROWN
& COMPANY, INC.

Largest Mfrs. of
Aromatic Red Cedar
in the World

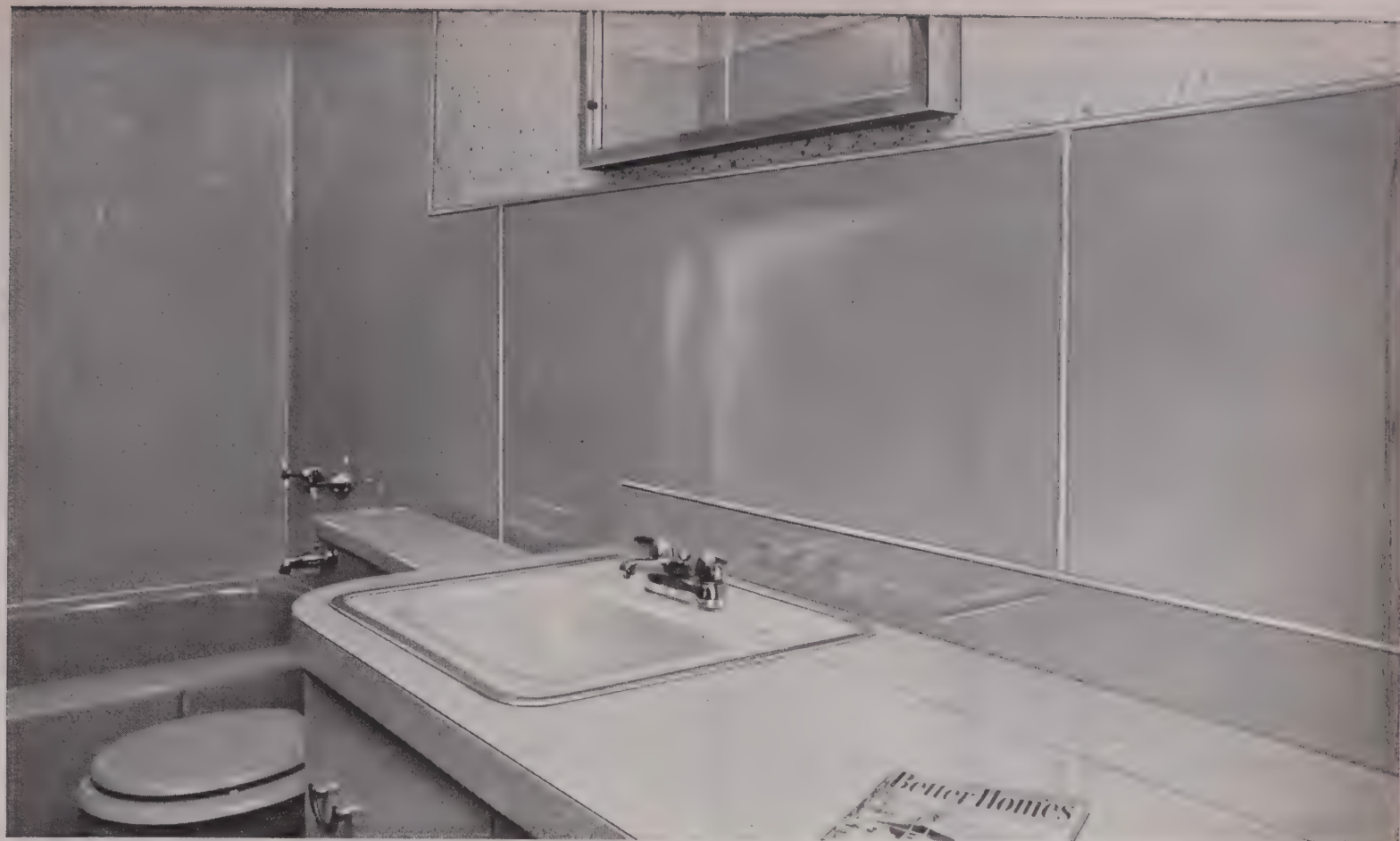
GREENSBORO,
NORTH CAROLINA

Please send me latest SUPERCEDAR literature.

NAME _____

ADDRESS _____

CITY _____ STATE _____



In the master bathroom, Pink Holiday Consoweld 10, with Twin-Trim® matched mouldings, is used on the walls; Turquoise Irish Linen is applied to the vanity top. Green Marble is used on walls of other bathrooms.

Jacksonville builder uses Consoweld on walls and counters in model home

Beauty and salability of the house were principal considerations when builder Joseph O. Shaffer selected Consoweld for this model home in Jacksonville, Florida.

Consoweld 10, the thicker plastic laminate, is used over rough plaster for bathroom walls. Consoweld 6, the standard thickness, is used on bathroom vanities and kitchen counters. Consoweld provides beauty and durability, freedom from cleaning and maintenance, and economical construction. Its beautiful color-tuned patterns have a strong appeal to prospective home buyers. Women quickly recognize the saving in housework that Consoweld walls and counter tops offer.

Consoweld is a dense, durable plastic laminate panel, made in two thicknesses. Consoweld 10—1/10 inch—can be applied directly, with mastic, over sheathing grade plywood, gypsum lath—even over masonry! Consoweld 6—1/16 inch—is used for shop fabrication on counter tops and furniture and where self edging is desired, or where butt jointing is required.

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See the Consoweld Booth at the January NAHB Show, Chicago



Builder Joseph O. Shaffer's model house in Jacksonville, Florida. The model home was designed from plans sponsored by a leading magazine.



In the kitchen, self-edged Consoweld 6 on counter tops. Yellow Irish Linen pattern was used which makes a gay, colorful kitchen that appeals strongly to women who visit the model home. Installations by Acme Fixture Co.

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TECHNICAL PUBLICATIONS

for further details check numbered coupon p. 272

- 361. AIR CONDITIONING.** Selection Manual No. 50. Anemostat diffusers. Anemostat Corp. of America, Dept. HH, 10 E. 39th St., New York 16, N. Y. 64 pp. 8½" x 11", ring bound

Air diffusers for both conventional and high velocity systems. Drawings, photographs and cutaway views of units, as well as tables and chart of design and performance characteristics. Specifications.

- 362. BUILT-INS.** Cabinets for built-in equipment. Beautycraft Kitchens Div. of Miller Metal Products, Inc., Dept. HH, 2215 Russell St., Baltimore 30, Md. 6 pp. 8½" x 11"

Drawings, dimensions, and specifications for metal kitchen cabinets to accommodate any brand-name kitchen appliance.

- 363. VAPOR BARRIERS.** Destructive moisture. W. R. Meadows, Inc., Dept. HH, 2 Kimball St., Elgin, Ill. 3½" x 9" foldout

Cause and effect of moisture, and the use of the Sealtight premolded membrane as a vapor barrier.

- 364. CONTRACTORS' EQUIPMENT.** Stow concrete equipment. Stow Mfg. Co., Dept. HH, 443 State St., Binghamton, N. Y. 16 pp. 8½" x 11"

Mechanical items for the builder or contractor who does his own cement work.

- 365. MILLWORK.** Cabinet construction data. Brochure No. 6. Architectural Woodwork Institute, Dept. HH, 332 S. Michigan Ave., Chicago 4, Ill. 20 pp. 8½" x 11"

Custom-designed cabinet and casework for residential and nonresidential use. Photos, details and sections, well worth combing for construction ideas.

- 366. LIGHTING.** Outdoor lighting for family living. General Electric Corp., Dept. HH, Neta Park, Cleveland 12, Ohio. 28 pp. 8½" x 11"

Principles, ideas, techniques and equipment available for residential out-of-door lighting. Prepared for the builder, landscape architect, or lighting designer, the booklet contains 49 photographs of good lighting practices.

- 367. LANDSCAPING.** Garden ideas from California. California Redwood Assn., Dept. HH, 576 Sacramento St., San Francisco 11, Calif. 20 pp. 8½" x 11"

Fences, patios, garden shelters, retaining walls and planting boxes of durable redwood. Photos and captions of actual jobs designed by leading West Coast landscape architects.

- 368. FOLDING ATTIC stairway installation.** E.-Z Way Sales, Inc., Dept. HH, Box 300, St. Paul Park, Minn. 7 min.

continued on p. 258

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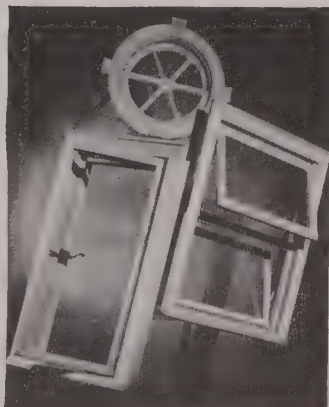


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For more complete information and literature, write Curtis Companies Service Bureau, Clinton, Iowa.

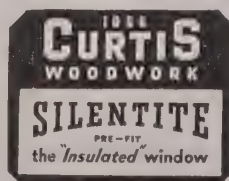


Two events to mark on your calendar—the Curtis exhibit at the N.A.H.B. show in Chicago and the permanent Curtis woodwork exhibit at the National Housing Center in Washington. Photo shows part of the permanent Curtis display in new housing center. N.A.H.B. Show—Sherman Hotel, Booths 579-580-581. Also Booth 746, Coliseum.

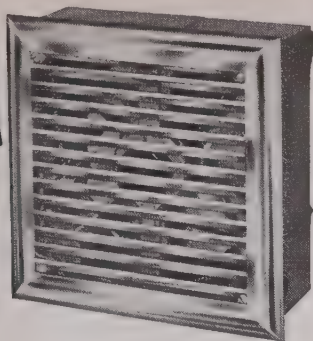
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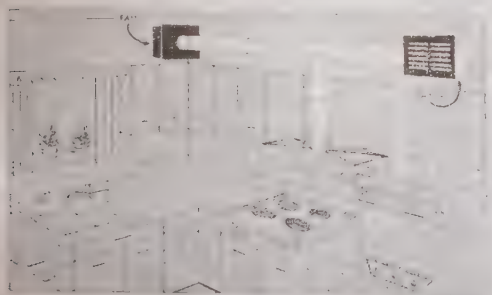
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Broan makes a complete line of fans for residential and commercial applications. See Sweet's file for 1956 — or write for a free catalog.

Broan MFG. CO., INC.
1679 N. Water Street, Milwaukee 2, Wisconsin

continued from p. 252

TECHNICAL PUBLICATIONS

for further details check numbered coupon p. 272

369. **PLUMBING.** Behind closed doors. J. A. Zurn Mfg. Co., Dept. HH, 1801 Pittsburgh Ave., Erie, Pa. 16 pp. 5½" x 8½"

The evolution of the wall-hung toilet from the first siphon trap closet patented in 1775. Though primarily intended for commercial buildings, home builders should be interested in the possibilities of wall-hung units for houses, as well (Round Table, August issue).

370. **LUMBER.** Wolmanized pressure treated lumber. Wolman Preservative Dept., Dept. HH, Koppers Co., Inc., 1301 Koppers Bldg., Pittsburgh 19, Pa. 16 pp. 8½" x 11"

A nontechnical presentation of the advantages of using pressure treated lumber, with specific applications in many construction areas.

371. **TILE.** Matico floor and wall tile. Matico Tile Corp. of America, Dept. HH, Newburgh, N. Y. 16 pp. in color, 8½" x 11"

Resilient tiles, their various qualities, colors and uses. Also shown are the Matico plastic wall tiles.

372. **PANELING.** The finishing of Philippine mahogany. Philippine Mahogany Assn., Inc., Dept. HH, 111 W. Seventh St., Los Angeles 14, Calif. 8 pp. 8½" x 11"

Full color photos of the various finishes possible with this useful wood, together with the formula used in obtaining them, as developed by a leading paint manufacturer.

373. **MATERIAL HANDLING MAGIC.** Baker-Raulang Co. Dept. HH, 1250 W. 80th, Cleveland 2, Ohio. 13 min. 16 mm. in color.

Documentary films. These films are available to industry groups (subject to prior reservation) to add interest and information to meetings.

374. **INVENTIVE DESIGN.** (tile installations). Tile Council of America, Dept. HH, 10 E. 40th St., New York 16, N. Y. 35 mm. sound-slide film, with accompanying record.

375. **GARAGE DOORS.** Graham doors. Graham Door Sales Co., Dept. HH, 6901 Carnegie Ave., Cleveland 3, Ohio. 4 pp. 8½" x 11"

Photos and specifications of flush sectional doors, plus installation chart.

376. **WINDOWS.** Thermopane technical manual. Libbey-Owens-Ford Glass Co., Dept. HH, 608 Madison Ave., Toledo 3, Ohio. 28 pp. 8½" x 11"

Thermopane insulating glass data, revised to include material on glazing air conditioned buildings. Two pages are devoted to building orientation and methods of shading glass exposed to direct solar radiation. Detail drawings and standard sizes.

continued on p. 264

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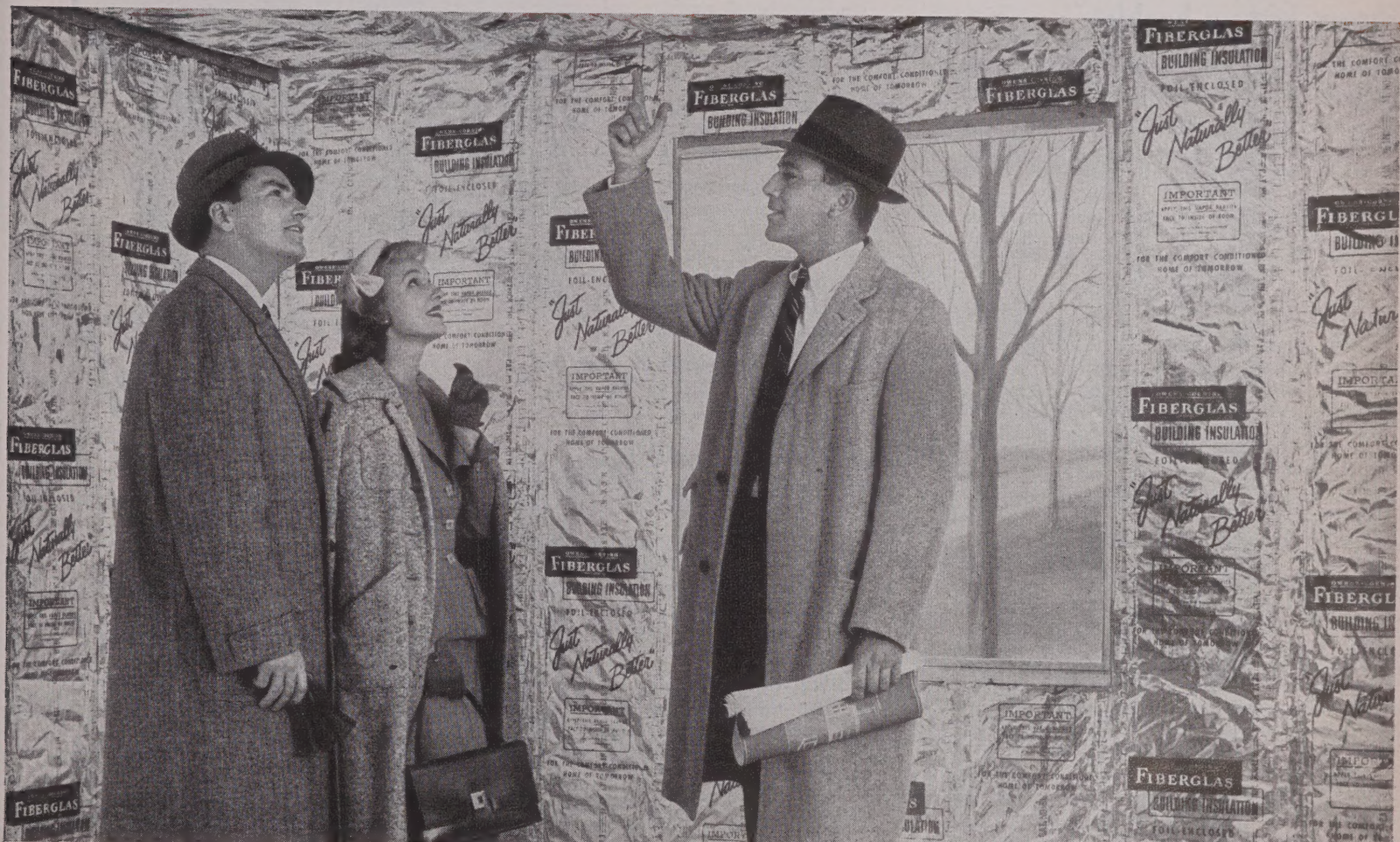
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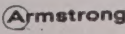




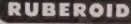
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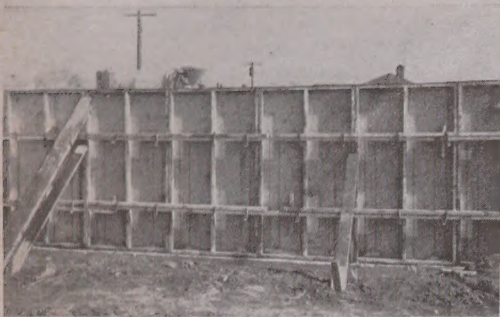
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continued from p. 258 TECHNICAL PUBLICATIONS

for further details check numbered coupon p. 272

377. CONCRETE BLOCK. Concrete masonry comes of age. Besser Co., Dept. HH, Alpena, Mich. 16 pp. 8 1/2" x 11"

Concrete block, in dozens of interesting designs and applications. Photographs.

378. SEWER PIPE. Fiber pipe installation. Line Material Co. Dept. HH, 700 W. Michigan St., Milwaukee 1, Wis. 4 pp. 8 1/2" x 11"

Installation "do's" and "don't's", for bituminous fiber pipe used in drainage, sewer and septic tank systems. Also information on the most common soil types.

379. COMBINATION DOORS. Bilt-Well Comodor. Carr, Adams & Collier Co. Dept. HH, Dubuque, Iowa. 4 pp. 8 1/2" x 11"

Specifications and photographs of wood and aluminum combination screen and storm doors.

380. PORCELAIN ENAMEL. Sketch book no. III, Erie Enameling Co., Dept. HH, Erie, Pa. 12 pp. 8 1/2" x 11"

Curtain walls, window walls, and trims of this ubiquitous architectural material. Details and specifications.

381. PANELING. How to panel. Georgia-Pacific Plywood Co., Dept. HH, 270 Park Ave., New York 16, N. Y. 10 pp. 8 1/2" x 11"

Primarily intended for consumer use, this booklet will give clear detailed instructions to any workman applying the company's Savannah Oak paneling (New Products, Aug. issue). Photos and details.

382. POWER TOOLS. How to use the portable Router. Porter-Cable Machine Co., Dept. HH, 1714 N. Salina St. Syracuse 8, N. Y. 48 pp. 5 1/2" x 8 1/2". 50¢ per copy

A manual of instructions for this tool, used as router, shaper or power plane. A valuable reference booklet for any millwork department.

383. ADHESIVE. Roltite technical bulletin. Mid-continent Adhesive Co. Dept. HH, 70 Sunshine Dr., Grove City, Ohio. 9" x 12", unnumbered pages

An index-tabbed guide to the entire Roltite line of adhesives, used to bond a variety of materials, including the fastening of wall paneling without nails (New Products, Nov. issue). Technical data and instructions for application.

384. CONTRACTOR'S EQUIPMENT. Gar Wood shovels and ditchers. Gar Wood Industries, Dept. HH, Findlay, Ohio. 9" x 12"

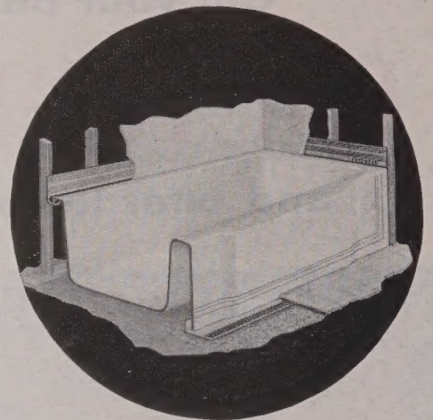
Heavy equipment for builder and contractor, tab-indexed for quick reference.

385. GARAGE DOORS. Raynor garage doors. Raynor Mfg. Co., Dept. HH, Dixon, Ill. 6 pp. 3 1/2" x 11"

Wide variety of doors available for residential installation.

continued on p. 272

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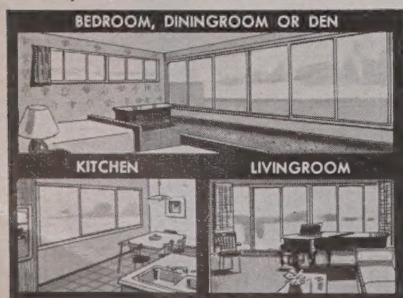
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386. TOOLS. Ramset fastening system. Ramset Fasteners, Inc. Dept. HH, 12117 Berea Rd. Cleveland 11, Ohio.

Powder actuated tools and fasteners grouped by sizes and uses, as well as by surfaces to be joined.

387. ROOFING. Reinforced built-up roofs. Owens-Corning Fiberglas Corp. Dept. HH, Toledo 1, Ohio. 32 pp. 8 1/2" x 11"

Application techniques for Fiberglas Perma-Ply No. 6 (New Products, Dec. issue), plus technical data and specifications.

388. WEATHERSTRIPPING. Woven pile weather seals. The Schlegel Mfg. Co., Dept. HH, 277 N. Goodman St., Rochester 7, N. Y. 8 1/2" x 11". Unnumbered pages

For the window or door manufacturer, this catalogue illustrated the variety of shapes and channels available for weatherstripping.

389. WINDOW WALLS. Glamour sliding glass doors. Glamour Glass Wall-Dor Corp., 4723 N. Pulaski Rd. Chicago 30, Ill. 8 pp. 8 1/2" x 11"

Aluminum sliding window walls in standard dimensions (3' or 4' modules). Details, specifications, and assembly instructions.

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- ee. Amweld folding closet doors
- ff. Vacu-Flo cleaning system
- gg. Majestic chimney
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- ii. Master vibrator
- jj. Clayton & Lambert water heater
- kk. Thrifty portable heater

TECHNICAL PUBLICATIONS

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- 388. Schlegel weatherstripping
- 389. Glamour sliding glass doors

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